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THE FORT LOOKOUT TRADING POST SITES - A REEXAMINATION

Harry H. Anderson

Abstract

A criticism is made of the identification of site 39LM57, the "Ft. Lookout II of the French Fur Trading Co." in a recent publication of the River Basin Surveys Papers, Bureau of American Ethnology Bulletin, No. 176. Events in the history of the upper Missouri fur trade, 1822 to 1852, are examined to show that this site was not the location of a post operated by the "French Fur Trading Co." between 1831 and 1840, or the "La Barge Post" of 1840-1851. The evidence is presented to substantiate the view that there was no "French Company" trading in the Fort Lookout area during the time indicated. Also it is stated that during the 1840's, the post referred to as "Fort Lookout" was actually the Yankton trading house located on the east side of the Missouri, across the river from the traditional Fort Lookout area.

The recently published report of excavations at a fur trade site on the west bank of the Missouri River above Chamberlain, South Dakota, in the Fort Randall Reservoir, by Carl F. Miller contains the conclusion that the results of this investigation "definitely established the location of an Upper Missouri trading post, namely Fort Lookout II, 1831-40, of the French Fur Trading Co., and the La Barge post of 1840-51" (Miller 1960: 81). Upon careful examination, however, this identification of site 39LM57 is untenable to the author for at least 2 reasons: 1) there was no "French Fur Trading Co." operating on the upper Missouri between 1821 and 1840, and 2) Joseph La Barge was located at the abandoned Fort Lookout site only from the late fall of 1840 to the early spring of 1841. In light of this situation, a reexamination of the historical evidence pertaining to the locations of the several Fort Lookout trading posts is in order.

According to Chittenden, "Fort Lookout was a post of the Columbia Fur Company and must have been built as early as 1822. Near it was Fort Kiowa, belonging to the American Fur Company and also built as early as 1822, ..." (Chittenden 1935: 928). Merrill J. Mattes, in his survey of the historic sites in the Fort Randall Reservoir, quotes this passage from Chittenden, adding in brackets that the Columbia Fur Company was "also known as the French Fur Company or Opposition" (Mattes 1949: 534). The statements of both Chittenden and Mattes are incorrect, however, for Dale Morgan, in his biography of Jedediah Smith, has satisfactorily cleared up the confusion resulting from the several names that were applied to this post (Morgan 1953: 376, 377). Information recorded by Duke Paul of Wuerttemberg, who was on the upper Missouri in 1823, discloses that there was only one permanent post in the area immediately above Chamberlain at that time, and it was being operated by an organization which Duke Paul calls the "French Missouri Company" (Wuerttemberg 1938: 404). This firm was officially known as Bernard Pratte and Company. There is no known basis for Mattes' statement that Pratte's French Company was in any way connected with the Columbia Fur Company organized by McKenzie, Tilton, Kipp, Laidlaw, and Renville.

Two locations have definitely been established as sites of major trade posts on this portion of the upper Missouri for the period 1823 to 1825. One of these

was at or near Cedar (or American) Island, opposite the city of Chamberlain. It is variously referred to as Fort Recovery, Cedar Fort, and Pilcher's Post, and was operated by the Missouri Fur Company under the direction of Joshua Pilcher (Mattes 1949: 572).

Further up the Missouri, but below the Big Bend, was a second post called Fort Kiowa, Fort Brazeau, or Fort Lookout. It was built by Joseph Brazeau, Jr., a veteran trader who had been on the upper Missouri among the Sioux for a number of years. Brazeau apparently established the post, the official name of which was Fort Lookout, in the late summer or fall of 1822, as the trading license granted to the Pratte firm was dated July 19, 1822 (Morgan 1953: 374). It allowed the French Company to trade with the Sioux, Poncas, Cheyennes, Arikaras, and Mandans on the Missouri River above Council Bluffs. A permit granted on July 17, 1822 to the Columbia Fur Company in the name of Tilton and Dudley, the partners who were citizens of the United States and therefore entitled to be licensed under existing statutes, specified this organization was to trade with the Mandans, Minnetaries, and Crows at their villages on the Missouri, and with the Sioux of the St. Peters (Minnesota) River (Morgan 1953: 375). Thus, in 1822, the Columbia Fur Company had not been licensed to trade among the Missouri River Sioux and had, therefore, no reason to establish a post near the Big Bend.

The post of the French Company is mentioned by its several names a number of times in the available literature pertaining to the upper Missouri in the period 1823 to 1825. There are several references to it in the correspondence of the Ashley - Leavenworth expedition against the Arikaras, including one letter which appeared in the National Intelligencer (Washington) dated "Fort Brazeau or Lookout", July 22, 1823. Peter Wilson, United States sub-agent for the upper Missouri tribes, resided at a fur post near the Big Bend during the winter of 1824-1825. Pilcher's Fort Recovery, the only other post in the Big Bend area, was abandoned during the early summer of 1824 (Morgan 1953: 113), leaving Fort Lookout-Kiowa as Wilson's only possible place of residence. His letters written during the winter from the Big Bend area display a familiarity with the activities of the French Company employees, thus reinforcing the belief that he was staying at their post (Anderson, MS.). When the Atkinson - O'Fallon treaty-making expedition came up the Missouri in June, 1825, they were met near the mouth of White River by Indian runners with a message from "Mr. Wilson, Sub. agent at Fort Kiaway" (Reid and Gannon 1929:21). Benjamin O'Fallon, the upper Missouri agent, in a letter to General William Clark dated St. Louis, December 15, 1824, describes the locations he had approved for fur trade operations on the Missouri, including one

> for the Cheyanns, Sawons, Titons, Yankton, and Oglala Tribes of Indians at the present Trading house of Pratte & Co. a short distance below the Big Bend called Fort Lookout (O'Fallon 1824).

The unknown author of the journal of the Atkinson - O'Fallon expedition provides the following description of the post which he calls Fort Kiowa;

> A range of log buildings containing 4 rooms - a log house & store house forming a right angle leaving a space of some 30 feet, at the south corner of the work is erected a Block House near to which stands a smith's shop, at the north corner is erected a small wooded tower, the whole works enclosed by cottonwood pickets, the sides or curtains to the works 140 feet each (Reid and Gannon 1929: 23).

The final report of the Atkinson-O'Fallon party records that on June 22, a treaty was concluded with the Teton, Yankton, and Yanktonais Sioux at Fort Lookout (American State Papers, Indian Affairs II, 1834: 605), although the journal of the expedition states that these treaties were signed at Fort Kiowa (Reid and Gannon 1929: 22). The unmistakable conclusion, as Mattes pointed out in his report, is that Fort Lookout and Fort Kiowa were one and the same. Morgan has supplied the explanation of why the names Kiowa and Brazeau were used interchangably with Fort Lookout by noting that Joseph Brazeau, who had built the post for the French Company in 1822, had the nickname of "Young Cayewa" (or Keiwars or Keewaws), hence Kiowa (Morgan 1953: 376).

In 1830, Jacob Halsey, a clerk at the American Fur Company post, Fort Tecumseh, located just above the mouth of Bad River on the Missouri, sketched briefly in the Fort Tecumseh journal, his personal experiences since entering the fur trade (Robinson 1918: 101, 102). He states that he was employed by the American Fur Company in 1826, and while in the service of that organization had visited Fort Lookout in November, 1827. This statement has particular interest because it may explain why Chittenden wrote that Fort Kiowa had been built by the American Fur Company despite the contemporary evidence that the post was actually erected by Pratte's French Company. In January, 1827, Bernard Pratte and Company became the St. Louis agents for the Western Department of the American Fur Company. Pratte and his associates were to share equally in the profits and losses from the operation of all the posts on the Missouri and its tributaries, and on the Mississippi below Prairie du Chien (Porter 1931: 744). One method by which this partnership operated may be seen from Halsey's statement that, as an employee of the American Fur Company, he was outfitted for a winter trading expedition from the Pratte Company's post of Fort Lookout. In addition to its being another link in the chain connecting Fort Kiowa and Fort Lookout, Halsey's remark is also the last known mention of trading activities taking place at the Fort Lookout-Kiowa site until the winter of 1830-1831.

With the absorption of the Columbia by the American Fur Company in 1827, the system of posts on the upper Missouri was reorganized. Fort Tecumseh, near the mouth of Bad River, became the Company's principal post among the Sioux; and the Fort Lookout-Kiowa site seems to have been abandoned.

We are fortunate in having readily available the surviving portions of the Fort Tecumseh journals for 1830 as they supply a considerable amount of negative evidence to support the belief regarding the abandonment of the Fort Lookout-Kiowa site. There is no mention in the Fort Tecumseh journal until January, 1832, of any operations being carried out in the Fort Lookout area. There are, however, a number of recorded incidents which strongly support the contention that no fur company had an active post on this location. For example,

June 20, 1830: Several Ponca Indians came all the way to Fort Tecumseh from their village on the L'eau Qui Court (Niobrara) River to open a trade. Baptiste Dorion was sent from the Fort with a cart and a small supply of trade articles to the Poncas' village to obtain beaver pelts and buffalo robes (Robinson 1918: 125). Had a company outpost been operating at the Fort Lookout-Kiowa site, the logical place for the Poncas to go in search of trade would have been there, particularly when their trade was so small that it could be handled by Dorion and only one helper with but a single cart-load of merchandise. Several days later Dorion returned to the Fort and then went out again to meet the Ponca village, now located near White River and moving northward (Robinson 1918: 127). Again, why send a man all the way from Fort Tecumseh to White River when the Fort Lookout site was so very much closer? The only answer is that there was no active post in the Fort Lookout area at that time.

July 4, 1830: A Company employee came to Fort Tecumseh from Medicine Creek where the Fort's horse herd was pastured, stating that because of the movement of the Poncas towards Fort Tecumseh, the herders were taking their animals from Medicine Creek to a more secluded spot in the Big Bend. Two parties passed back and forth to the Big Bend in the next few days; and finally on July 10, orders were sent to bring the herd in to Fort Tecumseh for protection (Robinson 1918: 128, 129). Again no mention is made of a post anywhere in the area where these events were taking place. It would have been much simpler to send a few additional herders to Fort Lookout and guard the horses there than to drive them all the way to Fort Tecumseh. The reason this was not done would seem to be that at this time no post at Fort Lookout was in operation.

September 4, 1830: Major Jonathan L. Bean, sub-agent for the Sioux tribes held a grand council with the Yanktons and Brûle Sioux at Fort Tecumseh. He was to take a party of Yanktons to St. Louis so that they might become party to

the treaty negotiated with a number of Eastern Sioux tribes at Prairie du Chien the previous July. Halsey records in the journal that Bean intended to return to Fort Tecumseh in several months and distribute the annuity goods due the Yanktons under the treaty at that point (Robinson 1918: 135). It should be noted that no mention is made of the Sioux Agency which in 1833 was maintained by Bean at Fort Lookout. The reason was that the Agency had not yet been built, nor apparently was there any other structure at that point. Later on, the Fort Lookout location was to become the center of the trade with the Yankton Sioux for a number of years, and would have been the most likely spot for Bean to hold his council with that tribe had there been any fur company establishment in the area.

September 27, 1830: Two fur company employees were attacked by several Yanktons on Ponca Creek. One of the whites was severely wounded and eventually died. His companion escaped and went to Fort Tecumseh for help(Robinson 1918: 138). Had the Fort Lookout location then been occupied, under these circumstances it would certainly have been the place to which he would have gone first.

Under the terms of the Prairie du Chien treaty of 1830, the participating tribes were to receive the services of a blacksmith in addition to their annuity goods. Agent Bean took the party of Yanktons to St. Louis where they affixed their marks to the document on October 13, 1830 (Kappler 1904: 305-310). Bean's earlier plan to deliver the Yankton goods in the fall of 1830 at Fort Tecumseh was not carried out; but from a letter by Joshua Pilcher (undated, but written sometime in the spring or summer of 1832), we know that in April, 1831, Bean delivered the goods due the Yanktons and then erected the residence and smith shop called for by the treaty of Prairie du Chien (Pilcher 1832). This is the best evidence available for fixing the date of construction of an Agency at Fort Look out. For at least 2 decades prior to this there had been an upper Missouri subagency in existence; but it was a purely administrative designation, without any permanent location. The agents, when in the country and not actively engaged in the fur trade themselves, resided at the nearest fur post.

It is not clear why the Fort Lookout location was selected by Bean for the Agency. Undoubtably, one factor was that the Yanktons did not normally roam as far up the Missouri as the mouth of Bad River. Bean's later hostility to the American Fur Company interests suggests that he may have been anxious to locate away from Fort Pierre Chouteau (constructed in 1832 several miles above Fort Tecumseh, which it replaced), and to be as independent of the influence of the Company as was possible.

With the erection of the Sioux Agency at Fort Lookout, the fur company built the branch post of Fort Pierre at that point to obtain the trade of the Indians who came there for their annuity goods and to avail themselves of the services of the agency blacksmith. No definite statement is known to reveal when this was done. The Sioux primarily affected by the operation of the agency were the Yanktons;and beginning in January, 1832, the Fort Pierre journal refers to the Grand post located at the agency as the "Yankton post" (Robinson 1918: 154, 159).

In the winter of 1831-1832, Narcisse LeClerc, a former employee of the American Fur Company, arrived on the upper Missouri with a considerable quantity of merchandise and the intention of trading in "Opposition" to his former employers. One of the points where LeClerc first located was the Sioux Agency where, according to the Company officials, Agent Bean did all in his power to assist LeClerc (Abel 1932: 203, 234; Robinson 1918: 150). This "Opposition", with powerful financial backing, moved into competition with the Company in several other localities besides the Fort Lookout area. LeClerc sent parties to Cherry Creek on the Cheyenne to compete for the trade with the Saone groups of Sioux, and to White River for the Brûle trade (Abel 1932: 234; Robinson 1918: 151). The following year, 1833, the "Opposition" was strengthened by the entrance into the upper Missouri trade of the firm of Sublette and Campbell. The recent biography of William Sublett (Sunder 1959) makes no mention of their having any connection with LeClerc; but it is known that when Kenneth McKenzie attempted to buy out the Sublette and Campbell

interests on the Missouri during meetings with Campbell in the winter of 1833-1834, nothing resulted because McKenzie wanted to include the "Sioux Outfit" in the arrangement. Campbell could not agree to this because LeClerc had an interest in the Sublette and Campbell trade among the Sioux, and he (LeClerc) had to be consulted first (Abel 1932: 329).

This was the situation in the spring of 1833, when Prince Maximilian arrived on the upper Missouri and recorded his descriptions of the activities of the Sioux traders in the Fort Lookout vicinity. Mattes, in his discussion of the Fort Lookout sites, concludes from Maximilian's remarks that there were 2 separate locations then referred to by this name (Mattes 1949: 540). Where he seems to be in error (and Miller in following him) is in interpreting Maximilian's remarks about the first of these sites noted. Maximilian says:

> In the course of the day we came to a place where an Arikara village had formerly stood, on the ridge of hills, which was destroyed by the Sioux and the inhabitants expelled. Opposite this was Fort Lookout, where the French Fur Company had a post (Wied-Neuwied 1906: 303).

Apparently Mattes and Miller assume that this Fort Lookout was then an active post. It would appear, however, that Maximilian is referring to a former occupation when he uses the past tense in writing "was located" and "had a post". It will be remembered that at this time, 1833, no French Fur Company was operating on the upper Missouri. The last known organization that was so referred to was the Papin-Cerre-Picotte firm that had been absorbed by the American Fur Company in October, 1830 (Abel 1932: Robinson 1918: 139). Between that date and the arrival of LeClerc in January, 1832, there had probably been no "Opposition" of any importance on the upper Missouri. Thus Miller is in error when he states that site 39LM57 was a post operated by the French Fur Company from 1831 to 1840, the last "French Company" having gone out of existance a year previous. The question then arises, what did Maximilian mean by his reference to the Fort Lookout that was operated by the French Company. It is the opinion of the present writer that this was the location of the Fort Lookout-Kiowa which, from 1822 to 1827 or 1828, belonged to Bernard Pratte and Company, the organization which Duke Paul of Wuerttemberg had called the "Missouri French Company (Wuerttemberg 1938: 404).

This opinion is not, however, in accord with the findings of Miller at site 39LM57, for he discovered no trace of any stockaded post containing more than one building. Yet the conclusion stated above appears to be the only reasonable one that can be drawn from Maximilian's statement in light of contemporary fur trade history. No evidence has been found to show that the later French Company, the Papin-Cerre-Picotte group, bought out by the American Fur Company in 1830, had had a post on this site. The Fort Tecumseh journal makes no mention of a post operated by either firm in this area, and it can be safely assumed that had one concern been located there, the other would be close by, trying to steal as much of the trade as was possible. This was the pattern of operations between the Company and the "Opposition" throughout the history of the trade from 1828 on. It was the situation at the mouth of Bad River, where the Papin firm had a house just across the river from Fort Tecumseh, and according to the journal of that post, both parties competed for the trade among the Brûles with wintering houses on White River. If Maximilian's statement is to be accepted as correct, the French Company of Bernard Pratte, which operated the original Fort Lookout-Kiowa, was the only concern which could be correctly called by that name and also had a known post in this area. Thus, the spot across the river from the remains of the ancient Arikara village must have been the site of the original Fort Lookout-Kiowa.

Returning once again to Maximilian's narrative, at a point a short distance up the river from the site of the "French Fur Company" post, after the Missouri makes a bend to the west, his party came to Major Bean's Sioux Agency. Maximilian describes it as follows:

> Sioux Agency, or as it is now usually called, Fort Lookout, is a square of about 60 paces, surrounded by pickets, 20 or 30 feet high, made of squared trunks of trees, placed close

> to each other, within which the dwellings are built close to the palisades. The dwellings consist of only 3 blockhouses with several apartments. Close to the fort, in a northern direction, the Fur Company of Mr. Soublette had a dwelling house, with a store; and in the opposite direction,was a similar post of the American Fur Company. (Wied-Neuwied 1906: 303, 304).

Maximilian's description fits rather well into the picture painted by the entries in the Fort Pierre journal. The trading house of "Mr. Soublette" was the establishment of LeClerc who, at least in 1833, had an interest in the Sublette and Campbell operation among the Sioux. The American Fur Company post below the Agency was the Yankton Post mentioned periodically in the Fort Pierre journals.

In the fall of 1833, another traveler passed the site and recorded a very brief word picture of the Agency. Nathaniel Wyeth, while descending the Missouri to St. Louis, wrote in his journal for September 11:

> We came to the Agency for the Sioux and Poncas Mr. Bean agent but not at the post [sic] we found it a miserable concern only three or four men but poorly fed and buildings out of order though new and shabbily built at best [sic] we were hospitably received by the young man in charge [sic]. (Young 1899: 216).

Just how long LeClerc operated his post near the Sioux Agency is not known. Sublette and Campbell sold out their interests in the upper Missouri trade early in 1834 (Sunder 1959: 134), and LeClerc may have then relinquished his share also. Even with the Opposition gone, the Company maintained the Yankton Post at Fort Lookout for the convenience of the tribes belonging to the Sioux Agency. In 1838, however, Joshua Pilcher, the incumbent Sioux sub-agent, was promoted to the post of Superintendent of Indian Affairs at St. Louis to succeed the recently deceased William Clark. From that fall of 1838 until early in 1842 the tribes of the upper Missouri above Bellevue (Nebraska) were without a resident agent or sub-agent. (Mattison 1958: 257). This fact is of importance in considering the second of Miller's identifications for site 39LM57, namely that it was occupied by Joseph LaBarge from 1840 until 1851. About the time the post of Sioux sub-agent was vacated by the promotion of Pilcher, the Sioux Agency at Fort Lookout was abandoned. A new location was selected near the Vermillion River and a blacksmith shop and residence erected in accordance with provisions of existing treaties with the Yanktons (Pilcher 1838). In all probability, Yankton Post was also abandoned by the Fort Pierre people about this same time, for LaBarge makes no mention of there being any other trading establishments nearer than Fort Pierre when he moved into the Fort Lookout area in the fall of 1840. LaBarge states that he planned to locate his operations in the abandoned buildings at Fort Lookout, for they were still thought to be in a good enough state of preservation to winter in (Chittenden 1903: 60). Miller takes the position that LaBarge located his trade goods at the site of the old French post, which the present writer believes to have been the Fort Lookout-Kiowa site. However, it would seem far more likely that what LaBarge was referring to was the abandoned buildings of the Sioux Agency, which was frequently called Fort Lookout, particularly since they had been vacated only 2 years previous, and would, therefore, have still been in tolerably good shape. How Miller could have concluded that LaBarge remained as an independent in the trade until 1851 is difficult to understand, since a reading of his recollections discloses the fact that LaBarge's "Opposition" on the upper Missouri lasted less than 6 months. He was on the lower river again by April 1, 1841, and soon back in the employ of the Company.

The Fort Lookout area appears to have remained unoccupied for the next several years. Captain Joseph A. Sire makes no mention of any habitation in his log of the steamer Omega while passing the vicinity of Fort Lookout on the upriver trip in 1843 (Chittenden 1935: 964, 965). In 1842 the Upper Missouri Agency was re-established, and Andrew Dripps appointed agent. Dripps made no effort to reoccupy the old Sioux Agency at Fort Lookout, instead making his headquarters in the fur company post at Fort Pierre (Mattison 1958: 260).

No further mention of Fort Lookout can

be found until 1846, when the Upper Missouri Agent, Thomas P. Moore, states that he met the Yankton Sioux at "Fort Lookout or Campbell's trading house"and there issued them their goods due under existing treaties. This was on his trip upriver. Moore again visited the Yanktons at Fort Lookout, which he says was 60 miles below Fort Pierre and the headquarters of the Yankton and Santee bands, on August 21 (Commissioner of Indian Affairs 1846: 289, 294). Father Jean-Pierre DeSmet, the Jesuit missionary, visited a Mr. Campbell at Fort Lookout in November of the same year (Chittenden and Richardson 1905: 609). There is rather frequent mention of this trading post operated by Colin Campbell in the Indian Agents' reports for the next few years. These references, together with several other items, permit the identification of its location as being on the east bank of the Missouri, near Crow Creek, and not on the west side in the area of the traditional trading post sites and the old Sioux Agency.

On June 13, 1848, while the Yankton annuities were being unloaded from the steam boat Martha, captained by Joseph LaBarge, the Yankton warriors fired on the boat and killed one man. Captain LaBarge,in describing the incident, stated that Campbell's trading establishment was located "at Crow Creek", a stream which joins the Missouri from the east (Chittenden 1903: 178). Thaddeus Culbertson, while traveling overland to Fort Pierre in 1850, stayed one night at the Yankton Trading House; but at that time it was under the charge of a Frenchman named Rondell (Culbertson 1952: 51-53), and not of Campbell, who was a half-breed Sioux. There is no question that the Fort Lookout operated by Colin Campbell between 1846 and 1851 was the Yankton Trading House located on one of the creeks entering the Missouri from the east just below the Big Bend, and not on the west bank in the area of the historic sites of Fort Lookout-Kiowa and the Sioux Agency of Major Bean. According to Rudolph F. Kurz, who passed the location on his way down the Missouri in 1852, Fort Lookout (Campbell's post) was then abandoned. It is not clear from Kurz' mention of previously passing the new wintering house of Campbell and Primeau whether Colin Campbell was now connected with the new opposition firm of Harvey, Primeau and Company (Kurz 1937: 332). More likely the linking of Campbell with the Harvey - Primeau organization referred to the fact that Robert Campbell of St. Louis (Sublette's old partner) was backing Harvey and Primeau against the old American Fur Company interests now operated as Pierre Chouteau, Jr. and Company.

It would appear, therefore, that in light of the historical evidence as set forth above, site 39LM57 could not have been the location of a post operated by a "French Fur Trading Company" which did not exist between 1831 and 1840, or the scene of Joseph LaBarge's brief venture in opposition to the Chouteau organization. And since Miller did not find any indication of a stockade at 39LM57, it does not seem to be the spot where the Pratte Company's Fort Lookout-Kiowa once stood. All traces of that post have probably been washed away by the Missouri. Records of trade licenses issued for the upper Missouri are scattered and incomplete, but enough do exist to show that the Fort Lookout area was a favorite location for the traders over a period of years. It was among the places designated on the following licenses: 1824 - B. Holliday and Switzer; B. Pratte and Co.; Joseph [sic] Pilcher; 1825 and 1826 - Columbia Fur Company; B. Pratte; Fontenelle, Bent, Dripps and Vandenberg; 1827 and 1828 - Jac. Bordeau and Touss. Pinnconneau; Peter [sic] Chouteau, Jr.; Louis Bissonette, Jr. and Joseph Primo [sic]; 1840 and 1841 - C. A. Beauchamp; John August Ebbitts; P. Chouteau, Jr. and Co. (St. Louis Superintendency, 1824-1842). The several occupancies discovered by Miller at 39LM57 could have been the remains of trading houses erected by any of these licensees. Archeological investigations at historic sites can be of immense value in supplementing the data already available from documentary sources, or in supplying new information when such material is nonexistant. However, care should be taken to acquire adequate skill in the use and interpretation of documentary material so as to be able to draw meaningful conclusions from the archaeological evidence.

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plains QUOTES

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Oliver Jensen, Editor

PHAROAH HAD IT EASY

Warren G. Manguson

As the snows melted in the spring of 1874 the grasshoppers suddenly seemed to appear everywhere on the Plains. So rudimentary were communications at the time that the widespread nature of the assult was not immediately realized. "Such a host of insects I never saw," reported a Kansas homesteader. "The ground is completely covered and branches of the trees are bending under their weight. In my orchard of nearly twenty acres the trees are covered by myriads. The grove on the north is one huge, moving mass."

"Thirty acres of wheat which looked beautiful and green in the morning is eaten up," he continued. "Six hundred and forty acres, two miles south of me, that was looking fine at the beginning of the week, looks this morning as though fire had passed over it."

Late that season, as the insects developed wings and began their aerial migrations, the St. Louis Republican printed this report: "A glance upward toward the sun revealed them filling the air as far as vision could extend, as thick as snowflakes in a storm, and they drifted along with the breeze, and fluttered down at your feet occasionally or lit on your nose, with as much concern as if they had been part of the elements."

The swarms described in this newspaper dispatch were a dark omen of what the next few years would bring. The plague of 1875 proved even more severe, and it, in turn, was surpassed by the grasshopper invasion of 1876 and 1877.

A SITE IN THE FORT RANDALL RESERVOIR[1] BRÛLE COUNTY, SOUTH DAKOTA

Ward F. Weakly

This paper is the first in a series of brief Minor Site Reports of the Missouri Basin Project which record the results of extensive tests of small-scale excavations in several minor archaeological sites in the Fort Randall, Big Bend, and Oahe Reservoir areas of South Dakota.

The field work was done between 1954 and 1960 by staff archaeologists of the Missouri Basin Project, River Basin Surveys, Smithsonian Institution. The reports were prepared by graduate students of the Department of Anthropology, University of Nebraska in 1960-61,during an upper division course conducted by Robert L. Stephenson, Chief of the Missouri River Basin Project. In preparing these reports the writers consulted with the staff archaeologists of the Missouri River Project, Warren W. Caldwell, Charles H. McNutt, Robert L. Neuman, and G. Hubert Smith. Further editing has been the work of R. L. Stephenson. The archaeological records, artifacts, and other excavation data from these sites, on deposit in the Missouri Basin Project laboratory in Lincoln, Nebraska, were made available to the writers along with the regular laboratory facilities.

The sites selected for reporting by Stephenson are those which owing to their small size would inevitably have been delayed in publication because of more pressing concern with the larger and more extensive excavations currently being worked. Yet, as will be seen in this series, these minor sites are important and each can be seen to contribute its share to the interpretation of the prehistory of the Missouri Valley. (Ed.)

Abstract

Site 39BR201 is an earth-lodge village located in the upper Fort Randall reservoir, Brûle County, South Dakota. Excavation of 1/2 of each of 2 circular earth-lodges, a midden area, and 8 test pits was done in the late summer of 1954 by Paul L. Cooper of the Smithsonian Institution, River Basin Surveys. Talking Crow Straight Rim,Talking Crow Indented,and Cadotte Collared pottery types make up most of the rim sherd sample. The presence of a few fragments of brass and iron in the features indicates a date in the late 17th or early 18th centuries for the occupation of the site. The ceramic material is related to that from the Two Teeth site and the Talking Crow site.

INTRODUCTION

Site 39BR201 is a single component earth-lodge village located in the E 1/2, NE 1/4, Sec. 24, T103N, R72W, Brûle County, South Dakota. It is situated on the east bank of the Missouri River in the upper Fort Randall reservoir, and is 15 river miles downstream from the town of Chamberlain (Fig. 3). The site is on a low terrace fronting on the Missouri River flood plain. The storage pool of the Fort Randall reservoir inundated the site in the latter part of 1954. Survey and excavation of this site were carried out in the late summer of 1954 by Paul L. Cooper of the Smithsonian Institution, River Basin Surveys, as a part of the Inter-Agency Archaeological and Paleontological Salvage Program.

The limits of the occupation included at 39BR201 are not known, but the distribution of cultural remains covered an area of several acres. Sparse surface materials consisted of a small number of sherds and bone fragments. The zone of occupation lies between 1330 and 1340 feet above sea level.

Prior to excavation, the site was in native grass. The surface indications consisted of at least 2 house depressions.

The soil profile followed a fairly constant pattern. The upper 0.5 of a foot was composted of a layer of nearly sterile

sod and an attendant root zone. The second level, extending from 0.5 of a foot to 1.5 feet, contained the bulk of the cultural debris and was characterized by a layer of light colored silt-like clay capped by a layer of grey silt. Sterile gumbo defined the lower limit of the debris-bearing zone.

Measurements were taken from a north-south line on which a 0 point was fixed south of the excavations. Vertical measurements were taken from a point on the terrace edge 5 feet below a datum located at the northeast corner of Section 24.

Several small test pits were dug in 0.5 of a foot levels. These were designed to test for features which were not apparent on the surface and also for the limits of the occupation. Excavation of the houses was carried out by digging an initial test pit in the center of the visible house depressions. After the depth of the house had been determined, one wall of the test pit was cut back in the form of a trench to locate the edge of the house. After this had been done, approximately 1/2 of each house was excavated. A midden adjoining one of the houses was also investigated. The material from this deposit was removed in controlled levels of 0.5 of a foot.

Features

Houses - About 1/2 each of 2 circular earth-lodges, Features 10 and 13, was excavated. The houses were probably constructed on or near the original surface since cultural materials occurred in the test pits to approximately the same depth beneath the present surface as the house. There was no evidence that either of the structures had been burned.

Feature 10 was 42 feet in diameter and 1.3 feet below the surface. Neither the floor nor the edge of the house could be defined. Three of the 4 center post holes contained bone wedges, and the fourth contained both bone and stone wedges. The outer ring of post holes included large, paired, bone-wedged holes interspersed on the same radius with small ones. The bone wedges in the outer post holes were usually on the side of the hole toward the center of the house. Wood fragments were found in most of the post holes. The entrance faced the southeast. The firepit was a centrally located basin containing an ash fill; no subfloor pits were observed. A midden area, Feature 11, was adjacent to the south edge of the house. Within the limits of the house there were 6 burned areas containing no ashes. All of these sloped slightly upward toward the apparent edge of the house, and 4 of the areas had hard surfaces as if they had been puddled and fired.

Feature 13 was 39 feet in diameter and 1.9 feet below the present surface. Only part of the west half of this house was excavated, a trench having been dug to expose the outer ring of post holes and an irregular excavation made to locate a center post hole. The center post hole contained bone and stone wedges; the outer ring of post holes, in most instances, contained bone wedges. The entrance and firepit were not located, and no subfloor pits were observed.

Midden - Feature 11 was located adjacent to the south edge of Feature 10. The boundaries of this midden deposit were not traced. The lower limit of the refuse bearing layer was at the same level as the apparent floor of Feature 10, 1.3 feet below the surface. A sterile zone, 0.5 of a foot to 0.6 of a foot thick, capped the artifact bearing level. Within the area excavated the refuse was relatively dense and included lenses of ash. Near the south wall of the excavation a disturbed area, probably a cache pit, was observed; but it was not excavated, nor was it exposed in horizontal section.

Test Pits

Feature 2 was a test pit expanded to include Features 7, 10, and 11.

Feature 3 was also an expanded test pit. It contained Feature 13.

Feature 4 measured 2.5 feet by 6 feet and was 2.4 feet in depth.

Feature 5 was a pit 5 feet by 5 feet and 2 feet in depth.

Feature 6 was 3 feet by 4 feet and 2.2 feet in depth. This pit was excavated in a slight depression which was apparently of natural origin.

Feature 7 was a pit 3 feet by 4 feet and 2 feet in depth. This feature was incorporated into the north part of Feature 2.

Feature 8 was an excavation 4 feet by 8 feet and 2 feet in depth.

Feature 9 measured 2.5 feet by 3 feet and was 2.3 feet in depth.

Artifacts

Pottery

The ceramic material from this site consists of 227 rim sherds and 3229 body sherds, making a total of 3456 sherds. The rims represent 3 types: Talking Crow Straight Rim, Talking Crow Indented, and Cadotte Collared, and a miscellaneous category. The body sherds are divided into 3 groups on the basis of surface treatment: plain, 54%; simple stamped, 37.04%; and brushed, 1.45%. The brushed sherds are horizontally brushed and are from the neck area of the vessels. A small percentage of the body sherds, 7.45%, were too fragmentary to be assigned to any of the above classifications.

Decoration occurs on 5.32%, or 172, of the body sherds. Within this group incised parallel lines occur on 37.4%, broad trailed lines appear on 24.6%, 13.9% have opposed, diagonal, incised lines; 13.9% were decorated with an incised herringbone motif; 2.5% have incised lines arranged in triangular plats; one or more rows of punctations occur on 5.8%; and 1.8% bear a single broad trailed line and incised intersecting diagonals over their entire surface (Fig. 2, M).

Talking Crow Straight Rim (121 Sherds)

Temper is grit, probably crushed granite containing quartz, feldspar, and mica. The color ranges from buff through gray to black. The exterior surface has been simple stamped on 40 specimens, and smoothed on 87. In height, the rims vary from 40 to 60 mm. The sample has 3 profile varieties. Form A (Fig. 1, C) is slightly flaring (65 specimens). Form B (Fig. 1, A, B) is straight (47 specimens). Form C (Fig. 1, E) curves slightly inwards (9 specimens). In almost all of the rims, the lip is slightly thickened as a result of decoration. On 22% of the sherds the lip is rounded; and on the remaining 78% it has been flattened. The lip appears to be the only portion of the rim on which decoration is found. This consists of either a row of punctations or diagonally incised lines. One sherd has a combination of the 2 techniques. Nine sherds are not decorated. The 2 sherds which have part of the shoulder attached are decorated with vertical, broad, trailed lines. Three specimens have strap handles attached. One of these handles is decorated with 5 rows of deeply incised lines (Fig. 1, D); one has a series of vertical, U-shaped, broad, trailed lines running from top to bottom (Fig. 1, A); another has, from top to bottom, first a row of vertical, incised lines, then 2 rows of incised lines forming a herringbone design (Fig. 1, B). In the center of this last handle is a deep (6 mm.), broad (23 mm.) impression which appears to have been made with the thumb.

The above pottery sample falls within the size, range, and general description of the Talking Crow Straight Rim type as defined by Smith for the Talking Crow site (Smith 1958a).

Talking Crow Indented (2 Sherds)

These sherds fit the above description of Talking Crow Straight Rim sherds from this site except in surface finish (Fig. 1, F, G). Both have been horizontally brushed. This type also fits the descriptions for the pottery at the Talking Crow site (Smith 1958a).

Cadotte Collared (63 Sherds)

The temper of these specimens is grit, composed of crushed granite containing quartz and mica; the color ranges from orange buff through gray to black. The interior surface has been smoothed, and the exterior surface of the collared portion of the rims has been smoothed and decorated. None of the sherds include enough of the body of the vessel to determine the treatment of the exterior surface. The rims range in height from 30 to 60 mm., and the collared portion ranges from 19 to 46 mm. On the interior, at the point of maximum diameter, a clearly defined groove is evident. The lips are round to flat with a slight thickening, probably as a result of decorative technique. Three of the varieties of decoration defined by Smith are present. Variety A (Fig. 2, I) is represented by 18 sherds which are decorated with a repeated herringbone motif. Twelve of these specimens have incising on the lip, one has a series of punctations, and one

has no lip decoration. Variety B is represented by one sherd which has incised lines arranged in opposition to each other in triangular plats. The lip bears a series of incised lines. Thirteen rims make up Variety D, and each has 3 or 4 rows of punctations, the top row grading into notches on the lip. Eight of these rims have a row of punctations on the lip, (Fig. 2, K) and 4 have no lip decoration. There are 4 other modes of decoration. Nine specimens have 1 or 2 rows of short, 8 to 19 mm., U-shaped broad-trailed lines. The top row is from 2 to 10 mm. below the lip. All of these have a row of punctations on the lip (Fig. 2, O). One group of 5 sherds has 1 or 2 rows of punctations. The top row is 6 to 12 mm. below the lip. Three of these specimens have a series of incised lines and 2 a series of punctations on the lip. A series of 10 rims have 1 or 2 rows of short, 7 to 9 mm., vertical, incised lines. Three of these have a row of punctations and 3, a series of incised lines on the lip. Two sherds, probably from the same vessel, have a row of parallel incised lines with a row of inverted, incised V's beneath them (Fig. 2, P) and have a row of punctations on the lip. Six sherds have a row of finger pinching which was probably just below the collar; however, the upper portion of the rim is missing on all six. One specimen has decoration on the shoulder; however, the pattern is not definable. There are at least 18 individual vessels represented in this type.

Miscellaneous (35 Specimens)

Twenty of these are rim sherds that are too fragmentary to be assigned to the foregoing types. Two bear a herringbone motif; one a design of opposed, incised, diagonal lines; 3, a series of diagonal, incised lines; 3 have incised, vertical lines, 1 has a series of horizontal, incised lines; 6 have a row of punctations along the lip; and 3 have incised lines on the lip.

The remaining 13 sherds in this group consist of handles and fragments thereof. Seven of these are strap handles. Three have a series of rows of punctations; one has 2 rows of vertical incised lines and 3 are not decorated. One sherd, a small part of the lip with a broken projection attached, has an incised herringbone pattern on the lip, and this is repeated on the projecting portion. The remaining 5 sherds in this classification are too fragmentary for further description.

Chipped Stones

Projectile Points (9 specimens)

Small pressure flaked flint points of 3 basic styles are present. The first group of 3 consists of triangular points with a straight base. The point has been broken off one specimen. They are 20 to 21 mm. in length, and 13 to 16 mm. in width (Fig. 2, S, T). The second group of 2 specimens is characterized by a leaf-shaped blade with a straight or nearly straight base - specimens in this group having broken points. The width of these 2 artifacts is 17 to 19 mm. (Fig. 2, W). The third group is represented by a single triangular, straight sided, side-notched specimen with a concave base (Fig. 2, X). Three specimens consist of the point only - the base being broken off. Two of these probably fall into the second group and the third probably fits into the first group.

Knives (19 Specimens)

These have been divided into 5 groups on the basis of form. Roughly rectangular, bifacially flaked blades, 5 specimens, make up group one. The edges of these quartzite blades tend to be convex. In length, they range from 48 to 54 mm., the mean being 51 mm.; and in width, from 24 to 33 mm. with a mean of 29 mm. Semi leaf-shaped, bifacially flaked flint blades, 4 specimens, make up group two. The length of these blades is from 35 to 43 mm., mean 39mm.; and the width is from 24 to 33 mm., mean 29 mm. Semi-circular, bifacially flaked quartzite blades with a straight base, 3 specimens, make up group three. The length ranges from 79 to 114 mm., mean 96 mm. The maximum width is 124 mm. Two of these specimens are incomplete. Irregularly shaped knives, bifacially flaked on one edge, make up group four - 2 specimens. These specimens, manufactured from quartzite, range in length from 56 to 75 mm., and in width from 48 to 64 mm. Roughly geometric chalcedony forms, sharpened on one edge, 3 specimens, make up group five. They

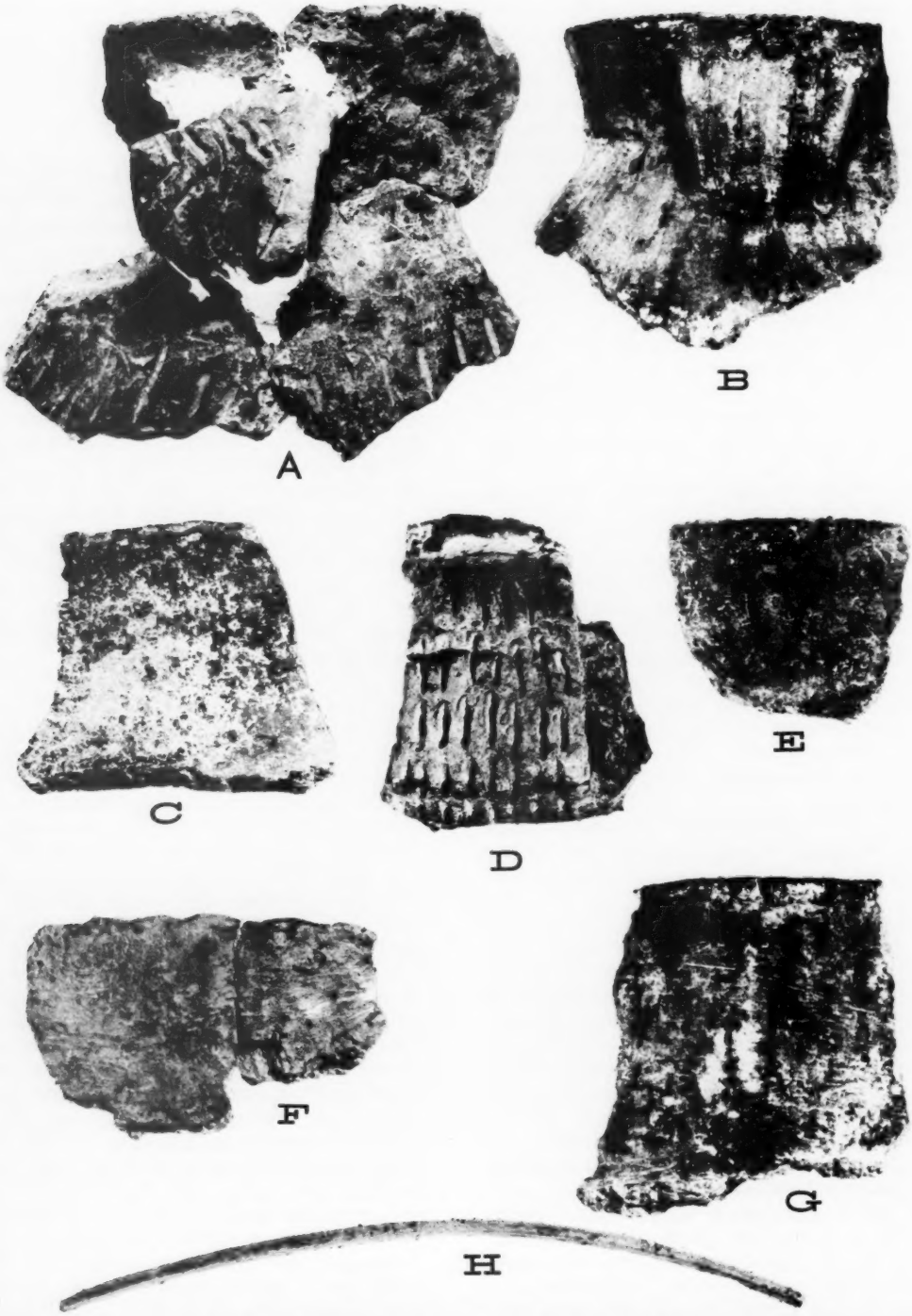

Fig. 1 - Artifacts for Site 39BR201: (A-E) Talking Crow Straight Rim; (F-G) Talking Crow Indented; (H) Miscellaneous Bone Artifact

range in length from 17 to 53 mm., mean 32.9 mm.; and in width from 19 to 38 mm., mean 29 mm. Roughly geometric chalcedony forms which have been bifacially flaked on 3 edges and tapered to a point on one end make up group six - 2 specimens. The length is from 26 to 54 mm., mean 40 mm.; and the width is from 26 to 28 mm., mean 27 mm.

Scrapers (68 Specimens)

These artifacts have been manufactured from flint, and are divided into 4 groups on the basis of form. Small, roughly triangular scrapers that have a triangular cross section make up group one - 10 specimens. They range in length from 15 to 35 mm., mean 22.5 mm.; in width from 15 to 36 mm., mean 22.5 mm.; and in thickness from 4 to 10 mm., mean 6.6 mm. (Fig. 2, U). Group 2 is made up of 2 small, roughly circular or oval, percussion flaked scrapers. These are 28 and 33 mm. in length, 8 and 9 mm. in thickness, and both are 25 mm. in width (Fig. 2, V, Y). Group 3 is made up of 14 relatively large, elongated scrapers which taper slightly to a flat base. The working end is rounded, and the upper surface has been formed by removing 2 or more large flakes. In length, these specimens range from 30 to 50 mm., mean 39 mm., in width from 18 to 30 mm., mean 25.9 mm.; and in thickness from 6 to 12 mm., mean 9.6 mm. (Fig. 2, AA). The fourth group is made up of 41 large, irregularly shaped flakes which have percussion flaking on one or more edges.

Cores (35 Specimens)

This is a group of relatively large, irregularly shaped, pieces of flint which show evidence of heavy percussion flaking. These were probably used as raw material for making stone artifacts.

Assorted Flakes (20 Specimens)

These are relatively small, irregular, unmodified, flakes of stone.

Ground Stone

Arrow Shaft Smoothers (45 Specimens)

This group consists of fairly large, roughly oval, pieces of sandstone with either 2 flat surfaces or 1 flat and 1 markedly convex surface. They have been grooved down the long axis on the flat surface. These specimens range in length from 71 to 79 mm., mean 74 mm.; in width from 29 to 43 mm., mean 38.7 mm. and in thickness from 16 to 26 mm., mean 20.2 mm. (Fig. 2, BB).

Sharpening Stones (10 Specimens)

This is a group of irregular pieces of sandstone and scoria that have one or more grooves of varying width and depth.. These have probably been used for sharpening various tools.

Grinding and/or Polishing Stones (23 Specimens)

A series of irregularly shaped pieces of sandstone all of which exhibit wear on one almost flat surface.

Ornaments (1 Specimen)

One specimen of a triangular-shaped, stone pendant that has been manufactured by grinding from crypto-crystalline quartz containing impurities. A hole has been drilled in the apex of the triangle. It is 33 mm. in length, 21 mm. in width, and 3.5 mm. in thickness (Fig. 2, Z).

Other Stone Artifacts (4 Specimens)

One is an ovoid piece of quartz which appears to have been ground on one surface. Another is an irregularly shaped block of quartz that has evidence of having been used as a hammer-stone. A third is a small circular shaft of sandstone with an enlarged base. The shaft of this specimen has been broken off. It is 39 mm. in length, 20 mm. in width, and the shaft is 10 mm. in diameter. The last specimen in this group is a nodule of unworked flint.

Bone and Antler

Hoes (10 Specimens)

This classification is divided into 2 groups. The first group, 3 specimens, is made up of Bison scapulae with the scapular spine and the ridge on the posterior border partly or completely removed. The glenoid cavity is unmodified and the cutting edge has been broken off in all instances. Group two, 3 specimens, is made up of bison scapulae with the scapular spine and the ridge on the

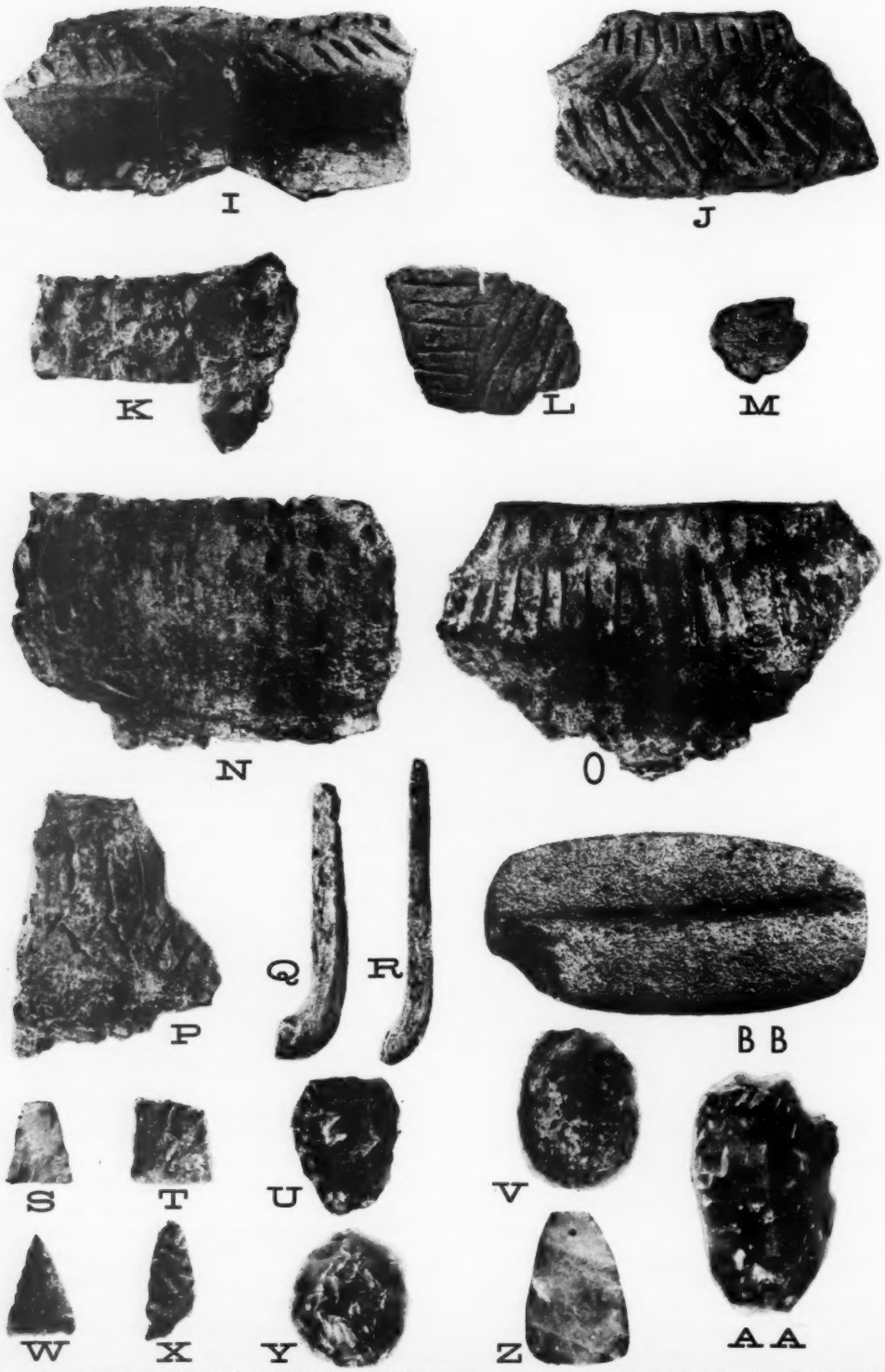

Fig. 2 - Artifacts for Site 39BR201: (I-P) Caddotte Collared; (Q, R) Fishhooks; (S, T, W, X) Projectile Points; (U, V, Y, AA) Scrapers; (Z) Pendant; (BB) Arrow Shaft Smoother

posterior border partly or completely removed. The cutting edge is rounded on the one specimen on which it is still intact. All of these specimens have been cut through at the neck in order to remove the glenoid cavity. There are indications of wear on the posterior and anterior edges. Six specimens are fragments of bison scapulae which bear evidence of being modified; however, these are not complete enough to warrant being placed in either of the above categories.

Awls (24 Specimens)

This classification has been divided into 5 groups. Group one, 1 specimen, is probably manufactured from a splinter of a bison rib bone. The cancellous tissue has been partly removed from the lower portion of the specimen. The butt end is very irregular, and the tip tapers to a sharp point. Group two, 8 specimens, is probably made from the edges of bison ribs which have been cut so as to include a part of the cancellous tissue. These specimens have a circular to triangular cross section. The butt ends have been rounded, and the tips taper sharply. This series ranges in length from 76 to 117 mm., mean 95 mm. Group three, 1 specimen, has been made from a bone splinter. It is unshaped except the tip which has been tapered to a point. The length of this specimen is 135 mm. Group four is made up of very thin (1 mm. maximum) narrow (4 mm. maximum) tapering awls, 2 specimens. Both of these specimens have been broken and presently are 46 and 50 mm. in length. Group five, 1 specimen, is made from the end of an antler. The tip shows signs of sharpening; otherwise, no attempt at modification is evident.

Hide Grainer (1 Specimen)

This artifact consists of cancellous tissue which has been cut from a large animal bone.

Scapula Knives (4 Specimens)

These are flat sections from the blade of a bison scapula and are probably fragments of broken hoes. The ends of these specimens taper to a point. The edges vary from blunt and rounded to relatively sharp. In length, they range from 106 to 157 mm., mean 134 mm., and in width, from 27 to 74 mm., mean 59 mm.

Scapula Scrapers (2 Specimens)

These are long, straight-sided fragments of the blade of a bison scapula. One side of the specimen is blunt and one side is fairly sharp. One piece has been cut so that the posterior border is partly intact, and one has been cut from the blade portion of the scapula only. These artifacts are 123 and 181 mm. in length, and 61 and 80 mm. in width.

Arrow-Shaft Wrenches (4 Specimens)

These have been made by drilling one or more holes through a section of a bison rib. All of these specimens have been broken. They range in length from 74 to 159 mm. The hole diameter varies from 10 to 15 mm., mean 11 mm.

Bone Tubes (5 Specimens)

This is a group of segments cut from the long bones of small mammals and birds. Three of the specimens are fragmentary. They range in length from 21 to 41 mm., mean 31 mm.

Whistle (1 Specimen)

This specimen is a section of bird bone with a small notch 7 mm. in width and 8 mm. in length cut in one side. It has been broken.

Snow Snakes (2 Specimens)

These are antler tines that have a relatively deep tapered socket in the cut end; their tips have been polished. They are 33 and 110 mm. in length. The maximum diameter of the socket is 6 and 21 mm. The minimum is 5 and 10 mm.

Fishhooks (3 Specimens)

This category has probably been manufactured from ribs. All specimens are broken. One of these hooks has a single notch on the shank, one has 4 notches, and the third has none. The lengths are from 44 to 63 mm., mean 55 mm. (Fig. 2, Q, R).

Quill Flatteners (2 Specimens)

This group of 2 specimens is made from segments of bison rib, one end of which has been rounded. They show evidence of polishing.

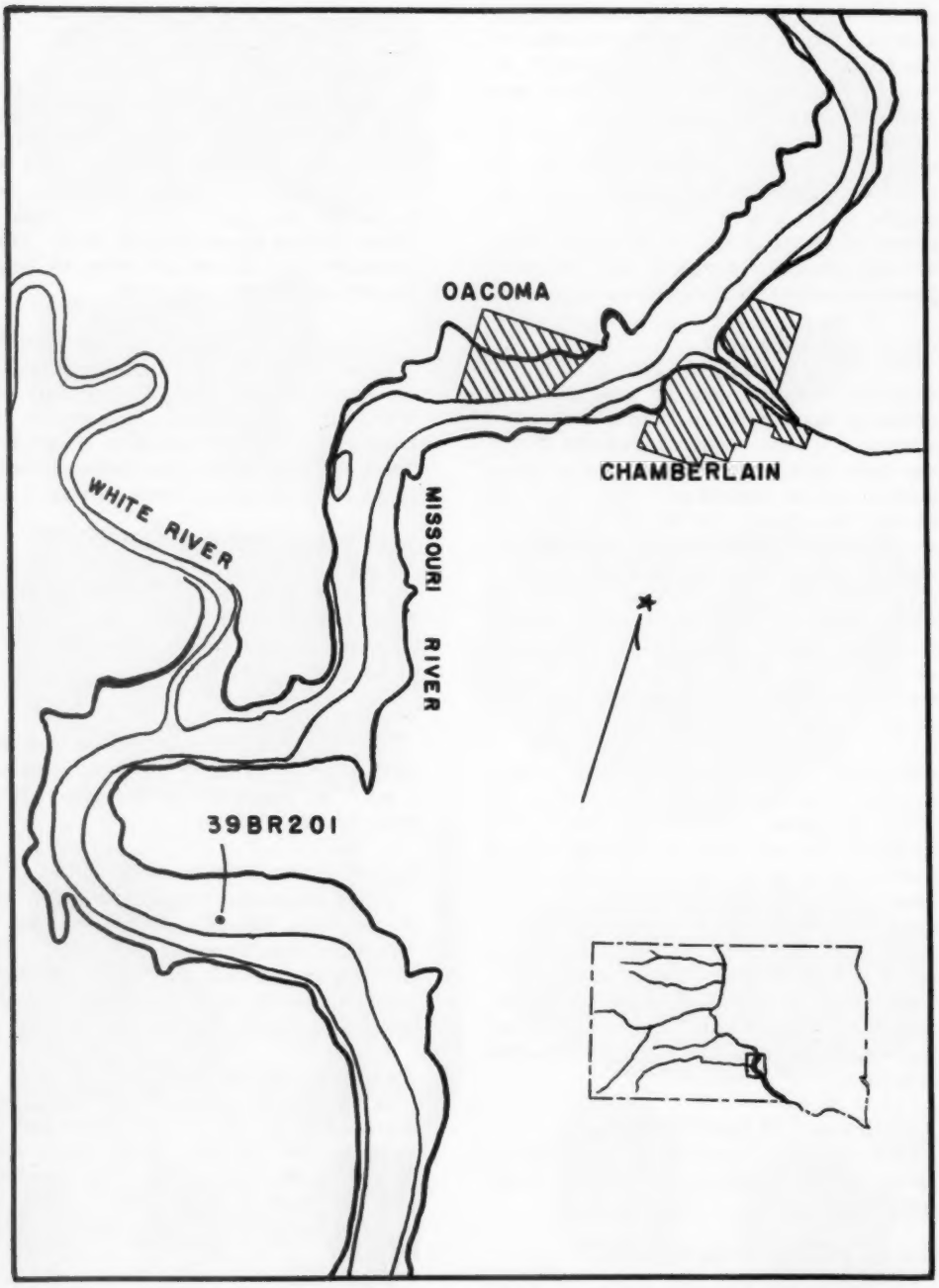

Fig. 3 - The Upper Fort Randall Reservoir

Modified Antler (6 Specimens)
These are of antler which have been cut on one end.

Other Modified Bone (5 Specimens)
One of these is a long (150 mm.), narrow (5 mm.), thin (3 mm.) specimen, the ends of which have been slightly tapered and cut square (Fig. 1, H). The second is a bison rib segment, possibly a pendant, which has been rounded on the ends. It tapers to the top where a hole 3 mm. in diameter has been drilled through the cancellous material. The third is a bison vertebra which bears a series of discontinuous horizontal scratches on the surface. The fourth is a small segment of rib that has been cut on one end. And last is a small triangular segment of the blade portion of a bison scapula.

Shell

Scoop (1 Specimen)
This consists of one valve with no modification other than evidence of wear as a result of use on the edge opposite the hinge.

Metal

Brass Tinkler (1 Specimen)
This specimen is a small cylindrical object rolled from a thin sheet of brass. It is 25 mm. in length and 8 mm. in maximum diameter.

Brass Fragments (2 Specimens)
These are small, irregularly shaped fragments of a thin sheet of brass.

Iron Fence Staples (2 Specimens)
One is a complete staple and one is a small fragment.

Iron Fragments (3 Specimens)
These are small, irregularly shaped, unidentifiable fragments of iron.

SUMMARY AND CONCLUSIONS

Of a total of 4261 specimens obtained from site 39BR201, 227 are rim sherds; 3229 are body sherds; 167 are stone artifacts; 61 are bone artifacts; and 577 are unmodified faunal remains.

The pottery belongs to the following types: Talking Crow Straight Rim, Talking Crow Indented (Smith 1958a); and Cadotte Collared (Smith 1958b). Sherd temper is consistently grit, primarily composed of crushed granite. All of the pottery ranges from buff through various shades of gray to black. In surface treatment, 54% of the sherds are smoothed; 37.04% are simple stamped; 1.45% are brushed; and 5.32% are decorated. The percentage of simple stamped sherds would probably be much higher if smoothing had not obliterated the indications of the original surface treatment. This is borne out by the fact that a large number of the simple stamped sherds have the simple stamping almost obliterated by a secondary smoothing. One other notable thing about the pottery from this site is the complete absence of cord roughening.

The ceramic material from this site does not closely match, percentage-wise, any of the reported material for sites in the immediate area. It will probably fit the material from the Two Teeth site or possibly fall between levels B and C at the Talking Crow site (Caldwell 1961, personal communication).

The stone artifacts fall into 10 major categories: projectile points, knives, scrapers, cores, assorted flakes, arrow-shaft smoothers, sharpening stones, grinding and/or polishing stone, ornaments, and a general category. None of the stone artifacts exhibits any diagnostic characteristics.

The bone and antler artifacts fall into 13 major categories including: hoes, awls, hide grainers, scapula knives, scapula scrapers, arrow-shaft wrenches, bone tubes, whistles, snow snakes, fish-hooks, quill flatteners, modified bone, and a general category. The hoes exhibit the only major anomaly. They are made in 2 quite different fashions; one type has had the glenoid cavity completely removed, and on the other type the glenoid cavity has been left intact. Both types of hoes were found in both houses.

Other artifacts include one piece of used shell and 8 specimens of metal.

The faunal remains from this site include: bison; deer; dog; prairie dog; Cynomid Ludovicianus; wolf; beaver; Castor canadensis; badger, Taxidea Taxus; goat; rabbit; turtle; catfish; and 3 varieties

BISON		BISON (cont'd)		BEAVER	
Skull, Occiput	1	Cannon	1	Humerus	1
Skull, Fragments	27				
Skull, Horn Cores	6	DEER		BADGER	
Teeth	18	Antler Tip	4	Maxilla	1
Skull, Otic region	1	Vertebra, Atlas	1		
Mandible	10	Vertebra, Cervical	1	GOAT	
Vertebra, Axis	3	Cannon	2	Horn Core	1
Vertebra, Cervical	3	Toe Bone	6	Astragalus	1
Vertebra, Dorsal	7	Mandible	1		
Scapula	15	Humerus	1	RABBIT	
Humerus, Proximal	2	Maxilla	2	Mandible	1
Humerus, Distal	15	Vertebra	5		
Radius, Proximal	11			TURTLE	
Radius, Distal	13	DOG		Shell	1
Ulna, Proximal	7	Humerus	2		
Metacarpal, Proximal	2	Ulna	3	FRAGMENTARY	
Pelvis	1	Scapula	1	UNIDENTIFIABLE	
Femur, Head	1	Toe Bone	1	Bone	200
Femur, Distal	2	Mandible	3		
Patella	1	Vertebra, Axis	2	CATFISH	
Tibia, Proximal	7	Tibia	1	Braincases - Braincase Parts	
Tibia, Distal	22	Vertebra, Atlas	1	Branchiostegal Ray	1
Astragalus	11			Parts of Palato-Quadrate Complex	
Calcaneum	12	PRAIRIE DOG			
Cuboid	5	Skull	3	Lower Jaw Part	1
Metatarsal, Proximal	29	Mandible	12	Pectoral Spine	4
Metatarsal, Distal	19	Humerus	2	Operculum	1
First Phalanx	5	Femur	5		
Second Phalanx	76	Tibia	1	SHELL	
Third Phalanx	32	Pelvis	2	Lampsilis Siliquoidea (Barnes)	8
Toe Bones	10	Skull Fragments	2		
Sesamoids	6			Lampsilis Cardium Rafinesque	1
Vertebral epiphyses	3	WOLF			
Vertebral spines	2	Ulna	2	Potamilus Alatus	
		Scapula	1	Megapterus	1

Fig. 4 - Faunal Remains, Site 39BR201

plains QUOTES

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Edward H. Spicer, Editor

DOCUMENTARY HISTORY OF THE FOX PROJECT 1948-1959
Reviewed by James H. Howard

From the very beginning of the study there is evidence of a great deal of soul searching on the part of the scientists as to their right to "interfere" in Fox culture, and an awareness of the disruptive effects which any outsiders who enter a native community have upon the lives of its members. The rationale adopted by the anthropologists at Tama was to freely admit that values enter into the operation of such a project. At the same time the group strove to let the people they were endeavoring to assist set their own goals. In no case were the values of the anthropologists intentionally imposed upon the community. Rather, the scientists endeavored to aid the Fox in defining their goals and then working toward their achievement. This, to me, is the essence of Action Anthropology, and the essential difference between this approach and the host of others which have been promulgated and attempted in the past by the Indian Service and others.

of shell, Lampsilis siliquoidea (Barnes), Lampsilis Cardium rafinesque, and Potamilus alatus megapterus.

The important features excavated at 39BR201 consisted of 2 houses and a midden area. The 2 houses proved to be of circular pattern with 4 main center post holes and entrance to the southeast. The center post holes and a series of large post holes around the circumference were wedged with bone or stone. Between the large post holes of the circumference were series of relatively small, shallow postholes which were not wedged. The firepits were basin shaped and filled with ash. No interior cache pits were observed; however, one probable cache pit was discovered in the midden area to the south of feature 2, but it was not excavated.

The presence of metal artifacts found in connection with other features of this site would indicate a possible date of late 17th century for the occupation of 39BR201. There was no evidence that the site was occupied more than once or that it was a large village.

[1] Minor Site Report No. 1, Missouri Basin Project.

Note: Submitted with the approval of the Secretary of the Smithsonian Institution.

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Missouri Basin Surveys
Smithsonian Institution
Lincoln, Nebraska
March, 1961

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Charles R. McGimsey, II, Editor

plains QUOTES

THE NONPROFESSIONAL IN THE LOCAL SOCIETY

Clarence H. Webb

Everyone is agreed that the nonprofessional serves the science best who surveys his area; makes well-recorded surface collections; watches for accidental exposure of artifacts and sites which turn up as a result of highway, railroad, or other construction; helps to make local collections available for school instruction or the study of interested experts; and maintains contact with the nearest professionals. All of these valuable functions can be carried out more effectively through group action in a local society. Certainly the unwitting or careless destruction of mounds and sites, which is proceeding at a terrific pace since the advent of earth-moving machinery, and the despoiling of sites by pot hunters can be prevented more effectively by group action than by individual effort.

THE INDEPENDENCE ROAD TO FORT LARAMIE: BY AERIAL PHOTOGRAPH

Thomas Morley

Abstract

Aerial photographs have been used to locate the eastern portion of the Oregon Trail, one of the earliest and most frequently used routes west. The section discussed is the section between Independence, Missouri and Fort Laramie, Wyoming.

Establishment of the location of the trail resulted from historical knowledge of the approximate whereabouts. Primary sources of the route were diaries of travellers, oral information, original township land plats,and other previously published sources.

Source of the aerial photographs is discussed together with photographic requirements for the study of old roads. The photographs used to identify the Laramie road are organized geographically and are classified by the author in terms of the road visibility on the prints.

Traced brokenly west and north across the central Plains from northwest Missouri are the visible but fading marks of one of the better known roads of the Old West, the "Oregon Trail". Interest in this particular road has been great; much has been written about it; and its route has been variously marked and plotted. It is the purpose of this article to discuss a special aspect of the study of this epic highway - the use of aerial photographs to ascertain its location. However, it may be of value first to review very briefly the history of the route.

The beginnings are to be found in the story of the fur trade and the energetic explorations accompanying its development. A party of men carrying dispatches to John Jacob Astor in 1812-13 from the latter's fur-trading post at the mouth of the Columbia River may have been the first to follow, in large part, the general route of the later road. Mountain men wandered the region at will. By the late 1820's traders and trappers had established a feasible route between the Columbia and the Independence area. The actual beaten track appeared at first only in the eastern half of the distance, where it was gradually developed mainly by the supply trains of the trading companies, trekking between Independence or points further east and the mountains. Travel was by pack animal initially, but in 1830 wagons were taken over the eastern portion of the trail about as far as present Casper, Wyoming, and over South Pass into the Green River area in 1832. As missionaries and then emigrants became stirred by the possibilities of the Oregon country, it was natural that they should use the trader's road for the first part of the long journey west. With the efforts of these people, wagons were pushed increasing distances toward the coast until in the mid 40's it became possible to roll them all the way to the settled parts of the area now comprising Oregon and California, rather than abandoning them short of the goal or floating them down the Columbia.

As the emigration progressed, departure points other than Independence were developed farther up the Missouri River, since they made possible a shorter and generally easier land journey. The Independence road nevertheless continued to carry traffic and receive a large amount of the total overland travel. Traffic reached a peak in 1849 and the early 50's when most of it headed for California. Succeeding years saw a diminished but steady flow of humanity until the completion of the transcontinental railroad in 1869 brought about the decline and eventual cessation of overland wagon emigration.

Recognition of the importance of the massive westerly migrations to the development of the United States coupled with the romantic nostalgia associated

Fig. 5 - Wyoming, Goshen County, 1937, photo AAM 5-41. North is to the right. The scene is 3 miles east of Ft. Laramie; the river is the North Platte, flowing from west to southeast. Roughly paralleling the river in the upper right corner is an irrigation canal that enters a tunnel 3 1/2" from the top of the picture and reappears about 1 1/4" to the left of the tunnel entrance, and then runs east and south. From a point 1/2" to the left of the tunnel exit, running northwest, is seen the Oregon Trail, joined near the top by a modern dirt road, leaving the picture 1 5/8" from the right at the top. East of the canal the old road soon becomes indistinct.

with western history recent in time yet remote from present experience have attracted much attention to all aspects of that history, including the details of the routes followed. In the case of the Oregon Trail, however, the search for the actual route has not involved the systematic use of aerial photographs, and it is one of the purposes of this article to emphasize the value of such photography as permanent source material. Aerial photos provide visual verification of road location as shown on various maps, and while the ground marks themselves continue to disappear with time, the photographs should last indefinitely if properly prepared. For this reason the earlier aerial photographs have great significance for one aspect of historical research, and it is to be hoped that the various agencies possessing them will not permit their deterioration or destruction.

Another purpose of this article is to give an idea of the frequent occurrence as well as the location of the visible parts of the old road. To this end there is provided a list of photographs covering the main route, with some of the major branches, from Independence and Kansas City to Fort Laramie, with accompanying indications concerning the visibility of the road. Fort Laramie is used as a stopping point since the writer does not yet have continuous coverage beyond that point, and it will be some time before this can be accomplished. For the same reason no report is made of the major roads west from St. Joseph, the Omaha area, and other departure points along the Missouri River. The Independence road is the earliest, one of the most frequently used, and one of the best preserved routes west; thus it is an appropriate choice for study. Actually there are large areas west of the Missouri where nearly every square mile was tracked up by wagons at one time or another, but very few of these marks remain. Only well-used routes which followed the ridge crests where the soil was thin or so rocky as to be left in pasture here and there, can be traced profitably from the air.

Nearly all of the photos listed are in the writer's personal collection. It would be appropriate at this point to thank the office managers of the Commodity Stabilization Service who so generously allowed me the use of their photograph files.

Recognition

How does one recognize the Oregon Trail upon seeing it? Recognition depends on a knowledge of the approximate whereabouts of the route. In some western regions where the population is sparse, where there are few roads, and surface features are well-preserved, the Trail may be so distinct and continuous as to be unmistakable, given its approximate location. In less suitable areas a map of some accuracy may be necessary, and sometimes it is not possible to be sure whether a particular track is the Trail or merely an abandoned ranch road. This difficulty is not as great as might be expected, however. In the Plains where space was plentiful, the travellers usually spread out, making a distinctive "trail" of several parallel, well-separated roadways not to be confused with the usual ranch road.

The history of the Independence road shows that, like most unsurveyed roads of the early West, its route was modified from time to time as later migrants picked a better way or as changes in local conditions made relocations desirable. Through the years and with increased traffic, the route became stabilized in most sections; it is this main, well-travelled road which, with a few of the better-used alternate routes, remains visible today. Alternates existed in many places. One typical example is to be found on the south side of the Platte River where there was a river-bank route for many miles; an alternate near the foot of the bluffs a mile or so away was used in times of flood while the former was used in drier periods.

Primary sources for the route of the Oregon Trail are diaries and other reports of persons using the road, oral information from witnesses, and the original land plats from the various townships through which the road ran. These materials have been used by several students of western roads whose studies are utilized following much of the route. Published sources used by the writer are Dawson (1912), Hulbert (1925-28), Long

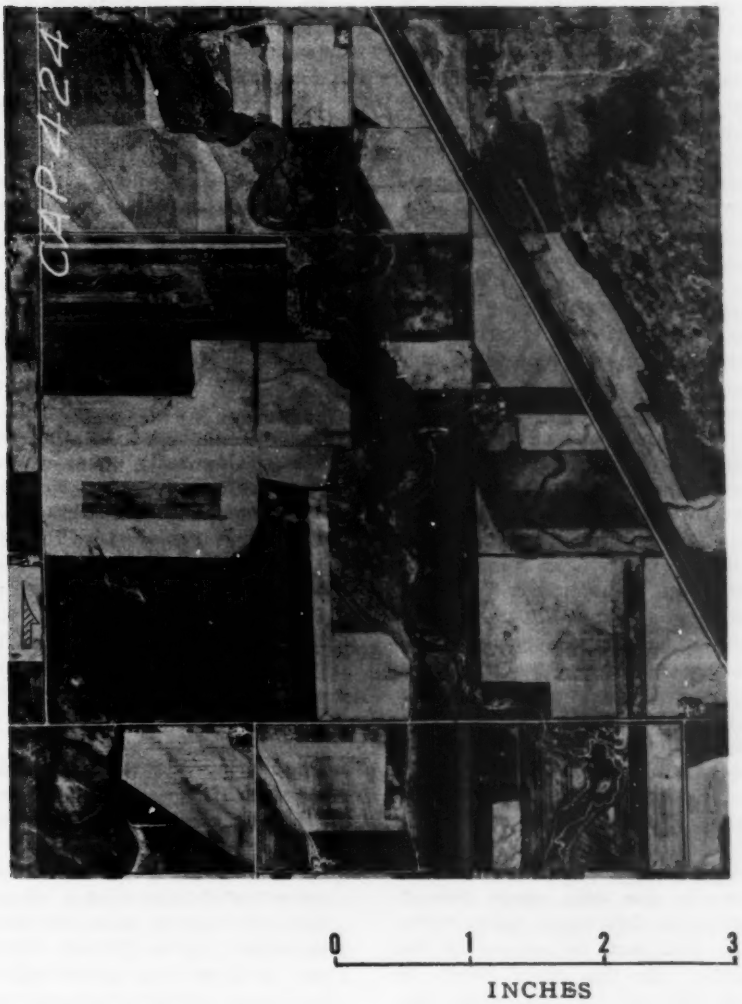

Fig. 6 - Nebraska, Deuel Co., 1939, photo CAP 4-24. North is at the top. The center of the picture is about 4 miles north of Ovid, Colorado. Lodgepole Creek can be seen flowing from NW to SE. The present highway and railroad are to its right, where they have obliterated the old road on that side, but the route on the opposite bank can be seen. It appears sharply in a pasture 2 3/4" from the right and 2" from the bottom, then is visible through plowed fields, and passes out of the picture between the "4" and the "24" of the identification number.

(1954), Paden (1943), and Wood (1955); of these, Hulbert was particularly useful. Additional sources consulted were George A. Root's 1908 tracings of the original 1855-56 land plats of Kansas, on file in the Kansas Historical Society Museum in Topeka, and a map of the Oregon Trail in Adams County, Nebraska, drawn in 1945 by M. F. Deets of Hastings, Nebraska. Finally, the writer has had the generous assistance of Paul Henderson of Bridgeport, Nebraska, who has studied the Trail for many years and is in the process of mapping it in detail.

Visibility

The almost treeless character of the Plains makes this region ideal for the study of surface configurations from the air. In fact, the old road is more visible from the air than from the ground because subtle differences in color of soil and vegetation are most clearly detected from a distance and in face view. Depressions in the ground do not show unless they are unusually deep, since aerial photographs are taken near mid-day to eliminate shadows. Thus only in those occasional instances where road swales involve little or no accompanying change in vegetation or soil exposure may the traces be more visible from the ground than from the air.

Within the Plains area the old track is increasingly visible from east to west due to the lesser rainfall in the west. The increased rainfall in the east and the deeper natural topsoils which are its indirect result increase the arable land so that there is not only more plowed land but less color difference between the surface soil and that turned up by the wagon wheels. On the other hand, in places where the top soil was thin, the wheels cut through to the soil beneath and the wind blew the loose topsoil away leaving the road marked by the color of the subsoil - usually lighter. Under such conditions the roadway may remain visible after many plowings. Similarly, the road is more apt to be visible on high ground than on bottomland where the topsoil is deeper and where periodic floods may alter the land surface. Thus the branch of the Oregon Trail which follows the floodplain of the Platte River westward for many miles from the Omaha area shows relatively few signs of its existence in the eastern section.

Differences in color of vegetation between the road and bordering land may be due to a variety of causes (Paden 1943:36). For example, in an area of shallow topsoil, crop plants growing in exposed and less fertile subsoil of the roadway may appear stunted when compared to those on either side; if unplanted, the roadway may support a growth of coarse annual weeds whose color will contrast with that of the surrounding vegetation. If soil differences are lacking, a slightly higher moisture content of the soil in the depression of the old road may result in the growth there of a different vegetation.

Some parts of the road have been used more recently than others and, therefore, have had a shorter period in which to become obscured by the processes of time. Generally speaking, the eastern parts of the different routes were first abandoned, since in those sections they were first replaced by the railroads and by regular road systems. Nevertheless, old emigration routes were used locally after the cessation of long-distance travel, sometimes for many years, until the development of surveyed county roads.

Photography

Assuming that one is unable to make his own flights and take his own pictures, the interested person must buy his photos. Aerial photographs may be purchased from several sources, most of them government agencies. Together these various sources have photographs covering most of the United States, although not with uniform specifications. Information on the different sources, the areas which each covers, and the cost and scale of the photography may be obtained from the Map Information Office, U.S. Geological Survey, Washington 25, D.C. With regard to the section of the Oregon Trail discussed in this article, the most suitable photography has been that of the Commodity Stabilization Service, of the USDA. The writer has obtained single-weight, glossy, contact prints for the most part; enlargements would be preferable, but they are very bulky and ex-

pensive. It has been found satisfactory to obtain only every other picture in the flight line, photographs being taken so that any one overlaps almost 2/3 of each of its 2 neighbors in the line, the overlapped areas then being subject to stereoscopic study by use of a special viewer. Alternate photographs cover no less territory but allow almost no stereoscopic viewing.

There are 2 dominant requirements for photographs to be used in a study of old roads: a large scale and an early date. The large scale, with the photographs preferably taken at a low altitude, is obviously required for maximum detail; the early date is desirable to avoid much of the erosion of detail which occurs with time. Slow natural weathering is commonly augmented by man's activities. For instance, in eastern Kansas the earliest photographs show the Oregon Trail (co-existent with the Santa Fe Trail) plainly outlined by a row of planted trees at one point and at another, cutting across a pasture. Later photographs show the Trail in neither place: the row of trees has been replaced by an airfield, and the pasture has been well plowed. The earliest suitable photographic coverage found by the author was made in 1936. Only if the quality of the first photography is bad or the scale or time of year is unsuitable should later photography be chosen over earlier.

This brings up the fact that not all flights are made at the most advantageous time of year. Due to local conditions of soil and vegetation, the road may be more visible in one month than another - July being usually, but not always, the best time of year. The photographs, however, may date anywhere from May to November. Flights made in different years over the same area are often made by chance at different times of year; thus one may provide details not shown by the others.

These photographs are black and white. It is probable that color photography would be better, but it would be prohibitively expensive.

If photographs are purchased as permanent reference sources, every precaution should be taken to ensure that permanence. Processing in the government laboratories is standard but does not come up to the requirements of archival quality. Prints should be treated (Eastman Kodak Pamphlet no. J-8: "Permanence of Photographic Negatives and Prints"), and stored in sulfur-free dust-wrappers such as plastic sheeting.

The Listings

A word of explanation is required for the list of photographs below. All these photos are from the Commodity Stabilization Service - those for Missouri and Nebraska being ordered through the Washington, D. C. office; those for Colorado, Kansas, and Wyoming from the Salt Lake City office. The letters in the citations of the individual photographs, as "CM", are the symbols designating the particular flights on which the photos were taken; for sake of brevity the symbols have not been repeated for each photo. The first succeeding number refers to the roll number of the film, and the second to the individual exposure. All must be given in ordering, as well as the county and year. Meanings of the notations placed after the citations are as follows:

- o - no marks recognized by the author as those of the road.
- ? - the marks seen are probably, but not certainly, those of the road.
- * the road faintly but definitely seen, interruped or continuous.
- ** - the road moderately distinct (interrupted or continuous), or very distinct but interrupted.
- *** - the road very distinct and unusually continuous.
- " - the road visible at a place already seen in the preceding photograph, in the overlapped portion.
- "* - the road visible in the overlapped portion of the preceding photograph and also faintly visible at a point not seen before.

These arbitrary estimations of visibility are given so that the reader may have some idea of the relative distinctness of the road at different points. Photographs in which the road was not seen are listed for purposes of continuity, and because overlooked marks may be there. The identity of alternate routes is indi-

cated when they are recognizable. Where a modern, surfaced road follows directly on the old one, a "not visible" notation is given. Major geographic and political features such as towns, highways, rivers, and county lines are noted so as to orient the reader. It is impossible to describe the actual position of the road in each photograph without the use of a complicated grid system and compass bearings, which is not worth the time or space. The author will be glad to help anyone who might wish assistance in finding the road on these photos.

Independence to Junction with Westport Road Near Gardner, Kansas

Missouri

Jackson Co., 1936. R2FL6-S-DL: 114°, Independence. 116*? 118°, Raytown. R1FL5-N-DL: 14°. 16°. R17F4-N-DL: 1411**? (outlined by trees). R4FL3-N-DL: 392°, Blue River. R4FL2-S-DL: 386°, New Santa Fé, state line.

Kansas

Johnson Co., 1937. ZL: 3-262°. 3-302°. 3-329°. 4-378°. 4-404*. 2-239", Lone Elm area. 2-220°. 2-170°, Gardner. 1-111°, area of junction with Westport road, and departure from Santa Fé Trail.

Westport Road to Junction with Independence Road

Kansas, Johnson Co., 1937. ZL: 1-31°, Kansas City. 3-272°. 3-290*. 3-340"*, Indian Creek;Lenoxa. 4-371**. 4-410*?. 4-447*, Olathe. 2-217**. 2-172"*, Gardner. 1-111°, area of junction with Independence road, and departure from Santa Fé Trail.

Combined Road

Johnson Co., 1937. ZL: 1-91° (Santa Fé Trail visible). 1-47*. 1-49*. 1-51". 1-53°. 1-54°. 2-143*?.

Douglas Co., 1937. ZK: 4-360°. 4-342° 3-301*?. 3-267°. 3-230°, Wakarusa R. 3-228°, Lawrence. 3-226°, 2-205°. 2-156*. 2-137"*?. 1-89*. 1-72*. 1-12", Big Springs.

Early Route, South of the Present Topeka

Shawnee Co., 1937. ZG: 33-79*, Big Springs. 33-50*?. 33-12"**. 32-103°. 32-50°. 32-52°. 32-22°, US 75, S. edge Topeka. 31-97*?. 31-63*. 31-17"**. 30-95*. 30-55". 30-16*?. 29-94°, Willard. 29-92°. 29-90°, Rossville.

Later Route, through Present Topeka

Shawnee Co., 1937. ZG: 33-81**, Big Springs. 33-44°. 33-20°, Tecumseh. 32-95°. 32-59°, Topeka. 32-15°, Topeka. 31-105°. 31-55°. 31-25°. 30-88°. 30-62°, Silver Lake. 30-11°. 29-90°, Rossville.

Combined Road

Shawnee Co., 1937. ZG: 29-71°. 29-56°.

Pottawatomie Co., 1937. ZB: 40-68°. 41-40°, St. Marys. 41-54*?. 42-18°. 42-31°. 42-97°. 43-4°, Red Vermillion R. 43-67**. 43-96", State highway 99. 43-98*. 43-100*?. 44-42**. 44-88"*. 44-92**, Westmoreland. 44-94"**. 45-26". 45-28*. 45-30*. 45-32"**. 45-34"*. 45-36"*.

Marshall Co., 1937. YW: 5-496**. 4-490". 4-488°. 4-486°. 4-410°, Black Vermillion R.; Bigelow.

Route via Independence Crossing of the Big Blue River

Marshall Co., 1937. YW: 4-412°. 4-384*. 4-382*. 3-317"*. 3-278"*, Mosquito Creek. 2-220*. 2-177*, Alcove Spring; Independence Crossing;Schroyer. 1-126". 1-128°. 1-74°. 1-72*. 1-34"*, junction with road from Marysville; junction is actually in Washington Co., and is visible here.

Route via Marysville

Marshall Co., 1937. YW: 4-412°. 4-384°. 4-382°. 3-377°. 3-320°. 3-322°. 3-273°. 3-271*. 2-228", Marysville; junction with roads from St. Joseph, one of which is visible here. 2-230°, Big Blue R.

2-168°. 1-134**. 1-70**. 1-34"**.

Combined Route

Washington Co., 1937. YV: 1-44"*. 1-46"*. 1-70". 1-68°. 1-66°. 2-145°.

Nebraska

Jefferson Co., 1938. BNB: 88-38*?, route crosses SW corner of Gage Co. here. 88-36". 59-91*. 59-42"**. 59-24**. 143-20"**, Rock Creek. 143-42"*. 143-77"*, Fairbury. 57-77"*, vicinity of fork.

Early route: BNB: 57-77**. 57-79"*. 57-43"**. 57-19", area of junction with cutoff and with Nebraska City-Beatrice road.

Virginia Cutoff: BNB: 57-77°. 57-79*. 57-43**. 57-19".

Combined route: BNB: 57-19**, Little Sandy Creek. 56-73**. 56-49"*, Big Sandy Creek.

Thayer Co., 1938. BNP-BNB: 56-13"*. BNP: 19-42°. 142-18°. 142-68*?. 141-173°. 141-138°, US 81 N of Hebron. 141-112*. 141-76". 141-50°. 164-20*?. 150-42°. 150-12°. 138-12*.

Nuckolls Co., 1938. BNI: 143-109"*. 101-106*, Oak. 163-11*, Black Pool, Narrows. 143-171"*, Angus. 143-173"**. 101-70"*. 101-60**.

Clay Co., 1938. BMQ: 5-118°. 5-169°, Deweese. 5-178*?. 10-80°, junction with Fort Riley road, which is visible here S. of the river. 10-36**, Spring Ranch. BML-BMQ: 10-21"*.

Adams Co., 1938. BML: 32-22". 132-40*. 32-95"**, US 281 S. of Hastings. 132-12"*. 84-12"*. 37-14"**. 37-41**, US 6 and US 34. 79-53"**. 132-111"*. 38-77". 43-11*?. 43-09°, Kenesaw. 43-72***, seven branches visible in sand hills near Susan Hail grave.

Kearny Co., using in this case photos of the adjoining Buffalo Co., 1938. BMO: 42-01". 42-58*?. 42-60°, Platte R.; area of junction with Nebraska City road. 42-118°. 42-123°. 42-181°. 42-186°, Ft. Kearny. 47-46°. 47-52*. 47-111"*. 47-117". 159-96*.

Phelps Co., using in this case photos of two adjoining counties: those of Buffalo Co., 1938: BMO: 62-58"*. 67-03"*. 67-62°. 149-28°. 67-125°, US 183 and US 383. 67-129°. BMS-BMO: 70-29°. Photos of Dawson Co., 1938: BMS: 127-34*. 70-67°. 70-122°. 70-127°. 70-181°, Plum Creek.

Gosper Co., using in this case photos of the adjoining Dawson Co., 1938: BMS-BMW: 70-195°. 154-10°.

Dawson Co., 1938. BMS: 98-88°. BMS-BMW: 98-59*?, US 283 S. of Lexington 93-201"*?. BMS: 93-171°. 76-215°. 76-179°. 76-142°. 76-115*. 76-81"*. 76-51"*. 76-17*. 71-52"**. 71-79*. 119-53**.

Lincoln Co., 1938., BNF: 169-31"**. 169-07"**. 72-177*. 72-111"*. 72-80"**. 72-18"**. 71-193"**. 71-149"**, Ft. MacPherson. 80-18"*. In the next several photos there are occasionally distinguishable a river-bank road, and an inland one near the foot of the bluffs a mile or so to the south. These are noted respectively as "R" and "I". 80-71, R*, I*. 80-91, R*?, I**. 80-140°. 80-175, R°, I**. 81-13, R*?, I°. 81-59, R and cross-over from I,**, I°; US 83 S of North Platte. 81-106, R**, I°. 81-147, R"**, I**. 81-195, R"**, I"**; junction of R and I. 82-38*. 82-83"*. 82-135"**, 1 mile S. of Hershey. 82-177"*. 85-17"**. 85-65"***, O'Fallon's Bluffs, Sutherland Reservoir. 85-119"**. 85-165"*. 86-14"**. BND-BNF: 137-08".

Keith Co., 1938-39. BND: 1938: 86-60*?. 86-81*, Paxton. 86-127"*. 1939: 177-153"*. 177-132"**. 177-84"*. 177-64"*. 177-12". 176-201*. 176-151"*. 1938: 92-11"*. 129-05", Ogallala. 92-70*. 92-88"**. 92-135". 1939: 176-133°, Brûle. 176-79°. 176-64°.

Lower California Crossing via Ash Hollow to the junction west of Bridgeport with the road from the Upper California Crossing. The early road from the North Platte area to Ash Hollow is so rarely

visible that it is not included here.

Keith Co., 1939. BND: 165-63**, crossing of the South Platte. 176-11"***. 176-13"**. Photo of Deuel Co., 1939: CAP 2-37"***.

Deuel Co., 1939. CAP: 1-80"**. 1-5"**.

Garden Co., 1939. CAQ: 20-25"***. 6-44"**, Windlass Hill. 6-68*, Ash Hollow, North Platte R.; road from North Platte area visible here. 6-91", Lewellen. 6-93°. 2-27°. 7-13*. 7-15"*. 7-17°. 7-70°. 7-68*, S of Oshkosh. 7-66"*. 5-88"*. 5-90"*. 8-32"**. 8-30"*. 8-28"**. 1-77"**. 1-75"**.

Morrill Co., 1939. CBA: 10-59"**. 13-30"*. 13-28"***. 14-28"**. 14-30"**. 8-62"*. 8-64"*. 8-73"*. 8-36"*, Broadwater. 8-34"*. 7-99"*. 7-97"**. 7-95"**. 7-47"**, area of junction with E. fork of road from Upper California Crossing. 7-49*. 7-51"*, Bridgeport. 6-54"*, area of crossing of E. branch of Sidney-Deadwood road. 6-56"*, crossing of W. branch of Sidney-Deadwood road. 6-58"*, junction with W. fork of road from Upper California Crossing.

Road via Upper California Crossing to junction with road from Lower California Crossing.

Keith Co., 1938-39. BND: 1939: 176-09*. 178-25". 1938: 100-77*, Big Springs.

Deuel Co., 1939. CAP: 4-50*. 4-52*?. 4-11**. 4-13"*; this photo is actually of Colorado territory.

Colorado

Sedgwick Co., 1937. YD: 81-28"*. 81-07"*, 1/2 mile S. of Julesburg. 80-86°, area of second Julesburg. 80-70°. 80-53°, first Julesburg; Fort Sedgwick; Ovid; area of Upper California Crossings. 80-51°.

Nebraska

Deuel Co., 1939. CAP: 4-24***: all notations for the road along Lodgepole Creek refer to the branch on the W. bank. That on the E. side has been obliterated by the present road and railroad. In this photo the W. bank road appears to have crossed over from the E. side. 3-80"**. 3-49"*. 2-92"*, Chappell. 2-90"**. 2-88"*. 2-71"**. 2-73"**. 2-75"*. 2-2"*, Lodgepole (this photo extends into Cheyenne Co.).

Cheyenne Co., 1939. CAN: 6-9*. 6-11". 6-13*. 6-15"**, Sunol. 6-17"*?. 6-19"*? 6-21*. 6-23"* (road fords to N. side of creek and enters hills). 6-25"**, state highway 19 near Sidney. 5-82"**. 5-26"*. 4-87"*. 4-34"*?. 3-79". 3-26*?, Gurley. 2-82"*?. 2-28*?. 1-82"*, Dalton. CAN-CBA: 1-27"**.

Morrill Co., 1939. CBA: 10-79"**, Mud Springs, Simla. 13-9"**. 9-46".

West branch, the main route, to junction with road from Lower California Crossing west of Bridgeport.

Morrill Co., 1939. CBA: 8-85*. 8-24"*, Pumpkin Creek; junction with a branch of the Sidney-Deadwood road. 7-88"**, Courthouse Rock; departure of the Sidney-Deadwood road branch. 7-53"**. 7-55"**, two more branches of the Sidney-Deadwood road cross. 6-58"**, junction with the road from Lower California Crossing.

East branch, north to junction east of Bridgeport.

Morrill Co., 1939. CBA: 8-85*. 8-27"*. 7-93"*. 7-47°, area of junction with road from Lower California Crossing.

Combined Route

Morrill Co., 1939. CBA: 6-60"*. 5-80"*. 5-78"*. 5-76"*. 5-66*. 5-68".

Scotts Bluff Co., 1939. CBC: 7-42*?. 3-82", McGrew. 3-80°. 3-78*. 6-11"*. 6-13"*?, Melbeta. 6-15". 5-89°.

Robidou Pass

Scotts Bluff Co., 1939. CBC: 5-91°. 5-93°. 6-22°. 6-24°. 6-26*?. 6-28"*. 6-30"*. 6-32**. 5-104"**. 6-68"**, pass. 6-70"*. 5-40"*. 5-17"*. 4-48*. 4-46"*. 4-30"*, Horse Creek and junc-

tion with Mitchell Pass road.

Mitchell Pass

Scotts Bluff Co., 1939. CBC: 5-91*. 5-93*. 5-95"*, Gering. 5-97"**. 5-51"**, pass. 5-5*?. 5-6". 4-58°. 4-56*?. 4-21", Mitchell. 4-23°. 4-25°. 4-27*?. 4-29"*?. 4-30"*?, Horse Creek and junction with Robidou Pass Road.

Combined Road

Scotts Bluff Co., 1939. CBC: 4-30*. 4-32"*, Lyman. 1-65*?.

Wyoming

Goshen Co., 1937. AAM: 16-37**. 15-58"***. 14-40"*. 13-52"*, Torrington. 12-47"*. 11-54"*?. 10-44"*. 9-46"*. 1 mile S. of Lingle. 8-50"***. 7-46". 6-54*. 5-41"***. 4-56"**, old Fort Laramie and present town of Fort Laramie.

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E. Mott Davis, Editor

plains QUOTES

SOME IDEAS ON ARCHAEOLOGICAL COLLABORATION

"It seems to me that the main stumbling-block for full fledged effective cooperative work between hobbyists and professionals (actually, quite a lot of it goes on)is that most professionals have more work on their hands than they can handle properly, and they find it hard to give the hobbyists the time they deserve, even though the benefits to science would be considerable. In my experience, the professional institutions where really effective cooperation is going on - the University of Missouri is one, and things are developing that way in Arkansas - are staffed by the kind of people who by choice work a 24-hour day, 7-day week, saving their vacations to catch up on their technical reading. Just when they sleep and eat isn't clear. The fault here is not with the people, but with the system. We need job situations where people can be hired with the specific understanding that part of their time is to be spent working with amateur research workers;a job of State Archaeologist would be such a position. The gains to a science would be enormous, particularly in archaeology where the full-time people in academic positions are expected to spend much of their time putting concentrated attention on relatively detailed problems, leaving inadequately attended the major field of everyday salvage (sites being exposed by various kinds of construction, cultivation, erosion, and so on) and continuing survey work. Experience says that such programs are usually most effective if carried on under the auspices of a museum".

THE COMANCHE KINSHIP SYSTEM IN HISTORICAL PERSPECTIVE[1]

Stanton K. Tefft

Abstract

An historical study of the Comanche kinship system throws new light on processes of kinship change. The Comanche are an unique group which underwent a long period of acculturation with little or no change in its system of kinship terminology. Before the turn of the 18th century the Comanche were closely associated with the Northern Shoshoni of the Great Basin. In earlier times the Comanche, like the Northern Shoshoni, had a culture similar to the Western Shoshoni groups of later periods. Toward the end of the 18th century both the Comanche and the Northern Shoshoni acquired the horse; this event produced numerous changes in Comanche culture. Later, when the Comanche migrated to the Southern Plains, further changes took place in their social organization.

In spite of these changes, the Comanche system of kinship terminology remained remarkably stable. Both in pre-Plains and pre-horse times the Comanche had a balanced division of labor, bilocal residence, bilateral groups of kin, bilateral descent, and Hawaiian nomenclature. After their acquisition of the horse and their migration to the Plains, the bicentered division of labor became patricentered; and bilocal residence changed to patrilocal. But Comanche descent remained bilateral and ownership, private and individualized. This suggests that the stability of the descent and ownership systems made for stability in kinship terminology.

The comparative investigations of kinship employing statistical methods to analyze the various functional relationships within the existing varieties of kinship systems have clarified many of the older conceptions about the nature of kinship (Murdock 1949; Driver and Massey 1957). These studies have also produced stimulating hypotheses concerning the nature and causes of kinship change. Yet even the authors of these studies admit that there is much ethnographic information which contradicts their statistically validated hypotheses. In most cases, these "exceptions" are explained by "accidents of history". A retreat from scientific to historical explanation in dealing with these "exceptions", however, cannot advance our understanding of kinship systems and their change.[2] If we are to improve our understanding of kinship phenomena, we must study intensively each of these "exceptions" and try to account for them by revising some of our hypotheses. For, if there are a number of exceptions to these hypotheses, they are not adequate explanations of existing kinship phenomena. In many respects the data on Comanche kinship cannot be explained by existing hypotheses. But before an analysis of the Comanche kinship system, a brief, critical review of the existing theories will give perspective on the problem.

Kroeber (1952: 180, 203), among others, has been chiefly concerned with the analysis of kinship nomenclature since, in his view, kinship terminology is determined by language not social practices and "reflects psychology not sociology". But Spoehr (1950: 3) has suggested that "the principal problems that engage students of kinship today are those of investigating the meaningful relations among the phenomena of kinship..." Thus, kinship terminology is now being examined as part of a kinship system or, in other words, a system of culturally conditioned behavior.

Comparative studies have tried to map the patterned variations in the range of the various kinship systems and to account for these differences in terms of social factors such as marriage, family

organization, descent groupings, familial residence patterns, inheritance and succession, and similar structural arrangements. Yet there is no complete agreement among anthropologists as to the nature of the relationship between kinship terminology and the other categories of kinship phenomena. Morgan (1871:480-85) believed that various forms of kinship nomenclature were created by different forms of marriage and the family. However, since Morgan failed to recognize the many forms of primitive kinship systems other than the Hawaiian and the Turanian-Ganowanian, his perception of the underlying relationships between kinship nomenclature and social organization lacked the necessary clarity. This deficiency in Morgan's approach to kinship was due to his emphasis on the similarities between "classificatory" kinship systems rather than on the differences between them (Eggan 1960: 186). Moreover, Morgan's view that kinship nomenclature remains stable in face of changes in marriage and family organization requires modification (Eggan 1960: 198). However, it should be remembered that, within some groups, kinship terminology has remained remarkably stable in spite of changes in other areas of their culture. The Comanche represent one such case; this group underwent extensive culture change without corresponding changes in the kinship nomenclature.

Later studies, which evaluated Morgan's works, clarified the relationships between kinship nomenclature and social structure. Lowie (1915: 331-3) in fundamental agreement with Tylor (1889) and Rivers (1914) demonstrated that Hawaiian systems of kinship are usually present in societies which lack clans while collateral merging systems appear in societies with exogamous moiety divisions. In a later article Lowie (1919), developing Sapir's (1916) idea, suggested that levirate and sororate marriage customs might help explain the occurrence of terminological distinctions between parallel and cross-cousins in tribes with multiple clan systems. In addition, Lowie felt that bifurcation and age-stratification also might account for the appearance of the Dakota-Iroquois nomenclature in sibless societies. White (1939: 567-70) disagrees with Lowie in that he believes that the Dakota-Iroquois system arises in those societies with "weak" clan systems while the Crow-Omaha systems make their appearance in those tribes having "developed" clan systems. White, however, never made clear what the distinction between "developed" clan systems and "weak" clan systems actually was. Two other investigators have noted the importance of marriage customs in determining the features of kinship terminology in groups with "weak" clan systems (Land and Lane 1959: 204). Other studies have stressed a number of social factors as determinants of kinship nomenclature such as descent systems (Allen 1955: 5-6) Eggan 1937: 42), marriage customs (Speck 1918: 46; Aginsky 1935: 450-51; Sapir 1916: 327), post-marital residence (Solien 1960: 152), land tenure (Murdock 1959: 140), complexity of socio-political organization (Service 1960: 755-9), or a combination of social customs (Lesser 1920: 720; Spoehr 1942: 105-109; 1944: 146-8).

Comparative statistical studies which have made an extensive sampling of the ethnographic literature on kinship have sharpened our understanding of some of these relationships. Certain features of kinship nomenclature have been definitely correlated with social customs. These studies indicate that there is a positive correlation between unilateral descent with exogamy and cross-cousin marriage. Bifurcate collateral systems are correlated with bilateral descent while bifurcate merging characteristics show definite positive correlations with unilateral descent. Moreover, unilateral systems of descent seem prevalent in societies with matrilocal or patrilocal rules of residence while bilateral systems appear frequently in societies with bilocal or neolocal residence patterns. However, there are cases where these particular relationships do not hold true (Freed 1960: 363-4; Driver and Massey 1957: 435-438).

Statistical studies have failed to explain many cases which deviate from the statistically validated hypotheses because these studies have not successfully handled the time dimension. While it is possible to say that Society A has a Type B kinship system with a, b, c....n traits

at one period of time and Type C kinship system with d, e, f.....n traits at another period of time, one can legitimately ask what has been going on in the interim. How have these changes been taking place? In other words, what are the processes of change?[3] If Society A is studied at a third point in time, an entirely different picture of its kinship system may emerge. It is, indeed, hard to grasp the relationships of the parts of a kinship system except over a period of time. Spoehr (1950: 11) has noted that "... .the demonstration of a relationship of functional dependence among variables of kinship is often very difficult unless the situation actually is a changing one, for the very meaning of functional dependence is that a change in one variable results in the change in a dependent variable." Such an analysis can be made only if we study kinship systems in the process of change, that is, in societies undergoing cultural change through the operation of internal and/or external forces.

Murdock (1949: 211), and Driver and Massey (1957: 438) have shown that kinship nomenclature is sensitive to changes in other aspects of the kinship system, i. e. to marriage patterns, residence rules, and so forth. These changes in kinship terminology follow a regular sequence of changes in social organization beginning with a change in the division of labor and proceeding in an orderly fashion with changes in residence patterns, land tenure, descent systems, and, finally, nomenclature. However, Freed (1960: 364-71), in his study of changing kinship systems among the Washo, indicates that social structure may be little affected by cultural changes while, on the other hand, the role of behavior of kinsmen may be affected. He concludes that it is the changing role behavior which produces changes in kinship terminology. Hallowell (1926), who, like Kroeber, assumes that linguistic-psychological factors are the most important determinants of kinship nomenclatures, seems to oppose both these views and attributes changes in kinship nomenclatures to the direct borrowing of foreign kinship terms and categories.

A historical study of Comanche kinship throws new light on the problem of kinship and kinship change. To understand the functional relationships within the Comanche kinship system a revision of some of these existing hypotheses is necessary; for instance, Comanche kinship nomenclature was very insensitive to changes in other areas of Comanche social organization. This fact seems strange in light of the studies by Eggan (1937), Spoehr (1942: 1947), Solien (1960) and Voget (1952) indicating that significant changes in the system of kinship terminology take place in tribes experiencing extensive acculturation.

THE PRE-PLAINS COMANCHE KINSHIP SYSTEM

Linguistic, cultural, and historical information indicates that the Comanche were associated with the Northern Shoshoni of the Basin before the turn of the 18th century (Wallace and Hoebel 1952: 19-21; Hyde 1959: 52-146). By this time the Northern Shoshoni bands, such as the Fort Hall, Bannock Creek, Wind River and the Lemhi Shoshoni, together with the Comanche had acquired the horse (Teit 1930: 351; Steward 1938:415). In pre-horse days the proto-Comanche and the Northern Shoshoni groups had lived much as the Western Shoshoni groups of later times. Having acquired the horse, the Comanche together with the Wind River Shoshoni pushed out onto the Plains in the latter part of the 17th century (Shimkin 1938: 415). Later the Comanche drifted southward in order to escape the attacks of the other Plains tribes and to be nearer the supply of Spanish horses. In the early part of the 18th century they were near the headwaters of the Arkansas; and by 1724, the Comanche occupied territories between the headwaters of the Platte and the Kansas Rivers. In 1836, the Comanche territory encompassed a great portion of the Southern Plains (Wallace and Hoebel 1952: 6-7).

Steward (1938: 201) has suggested that before their acquisition of the horse, the Northern Shoshoni peoples (and presumably the proto-Comanche as well) manifested cultural traits similar to those of the Western Shoshoni groups. They were simple collectors of seeds, roots, berries, and insects. Both men and women had important economic roles but

women were considered socially inferior to the men. The bilateral family constituted the basic economic and social unit. Families united in winter villages or for collective antelope and rabbit hunts, festivals, or fishing enterprises; however, these social gatherings were only temporary alliances. During most of the year single households, or at most, small camps of related families (deme-like groupings) travelled over a wide area looking for food. Since the area of exploitation traversed by any one family or camp group overlapped, village or family ownership of land was impossible. However, those persons who had expended labor in the collection of food or the manufacture of tools and weapons claimed ownership rights to the foodstuffs or manufactured items. Food was shared with relatives who occupied the same camp or village and utensils and weapons were freely loaned. The winter villages and the more nomadic camp groups were led by a headman who had only limited power over the individual families. There were no clans, moieties, classes, clubs, or other associations.

Shimkin (1941:234) has stated that at one time all the Uto-Aztecan groups (including the Shoshoni) had a similar kinship system. One important feature of this kinship system was the lumping of parallel cousins, cross-cousins, and siblings under one term. Another feature of the system was its terminological separation of mother's brother and father's sister from father and mother. Thus, Shimkin's data suggests that the Basin Shoshoni, at one time at least, had a Hawaiian system of nomenclature. However, both Shimkin and Steward's (1938:284) studies indicate that some of the Shoshoni groups, especially those who practiced cross-cousin marriage, sororal polygyny, and fraternal polyandry, made changes in their system of nomenclature, i.e. used bifurcate merging and gave separate terms to cross-cousins while lumping parallel cousins with siblings. Other Shoshoni groups, including, as we shall see below, the Northern Shoshoni (and proto-Comanche) retained older systems of cousin classification.

The Northern Shoshoni's acquisition of the horse required new ecological adjustments; these ecological adjustments, in turn, produced changes in their culture (Steward 1938:200-300). The horse provided these bands with a ready means for exploiting the buffalo herds. In summer and fall the buffalo were intensively hunted by large parties composed of members of the various families and camps. During the rest of the year individual families or small bands of related families collected berries, roots, nuts, seeds, and insects, and hunted antelope, rabbit, and other animals. Thus, the activities of the men and the women were of equal importance to the survival of the group. Because of the horse, families could range over large areas to search for plant and animal food yet remain in one locale. Therefore, winter villages usually consisted of large settlements composed of many family units. There is no indication, as Murdock (1949: 62-3) implies, that these villages constituted deme groupings, that is, endogamous local communities whose inhabitants are related through intermarriage. The demes were more characteristic, as we have seen, of the pre-horse Shoshoni and the Western Shoshoni groups. Nevertheless, several factors favored the retention of the nuclear family as the basic social unit among the proto-Comanche and the Northern Shoshoni at this time. Since communal hunts, which were carried out by larger band aggregates, did not provide enough food for the whole year, collecting and gathering activities remained important; these were carried on by individual families or small bands of kindred. Post-marital residence varied with the individual circumstances; thus, it can be characterized as bilocal. These bilocal residence patterns favored the isolation of the nuclear families since this form of post-marital residence worked against the formation of lineage and clan groupings. Bilateral inheritance, which characterized the Shoshoni descent patterns, was consistent with the bi-centered division of labor. Both men and women were considered the owners of the foodstuffs which they gathered or hunted, but they usually shared them with their closest relatives and friends. People commonly lent personal possessions to friends and relatives but in most instances permission to borrow was necessary. However, as Cappannari

(1960: 136) has suggested, the fact that the Shoshoni had "private ownership" (individualized ownership)of certain goods and resources did not give "private owners" a right to exclude others from access to the natural resources or to the use of personal goods. A person unwilling to share goods or foodstuffs was ridiculed and ostracised by friends and relatives.

The proto-Comanche had an Hawaiian system of kinship terminology (Steward 1938:284) as did the Northern Shoshoni. While many Hawaiian kinship systems are characterized by lineal or bifurcate, collateral mother-aunt terms, the Comanche system, in contrast, manifested bifurcate merging which is usually postively correlated with exogamous unilateral systems. Female relatives of ego's mother's generation and kindred, real or fictional, were called "mother" (MSs, FBrW, Step-Mother, Mother's female cousins) while the male relatives of ego's father's generation and kindred, real or fictional, were called "father" (FBr, MSsH, Step-Father, father's male cousins). The mother's brother and the father's sister were given separate terms. Some bands made age distinctions between the father's older brother and father's younger brother and their wives in much the same fashion as the older Uto-Aztecan groups did (Shimkin 1941: 234). In this case, the principle used in making age distinctions between "brothers" was extended by analogy to the father's brothers; why this was not also done for the father's sisters is not clear.

Ego's brothers and sisters were differentiated on the basis of age. Terms for the brothers and sisters were extended to all cousins. Since the bands did not practice cross-cousin marriage, there was no need to differentiate the cross-cousins. Ego equated brother's children (male speaking) and sister's children (female speaking) with his/her own sons and daughters. Step-sons and step-daughters were lumped with ego's own sons and daughters. The extensive pseudo-cross-cousin marriage among the Comanche accounts for this particular lumping of relatives. The 4 grandparental categories were self-reciprocal with the 4 classes of grandchildren. A single reciprocal term was used between great-grandparents and great-grandchildren.

Thus, the proto-Comanche-Northern Shoshoni kinship system had the following cluster of functionally related traits: bilateral descent, Hawaiian sister-cousin terms, bicentered land tenure, and bilocal residence. This functional cluster of traits differs from one normally found in societies with Hawaiian nomenclature as has been established in previous studies (Driver and Massey 1957: 429). Societies with unilateral descent systems and exogamy are more often associated with bifurcate, merged mother-aunt nomenclature (Driver and Massey 1957: 417). At no time in their history did the Comanche have a unilateral descent system. Thus, bifurcate merging cannot be a vestige of an earlier lineage or clan system. However, the Comanche did have strong patterns of levirate and sororate marriage. These marriage patterns would account for the bifurcate merging. It is possible, then, that societies like the Comanche which have kinship systems with bilateral descent but bifurcate merged mother-aunt terms also have strong rules of levirate and sororate. While Murdock (1949: 124) found no statistical validation of Sapir's (1916: 327) levirate-sororate hypothesis as an explanation for bifurcate merging, it is still quite possible that a modified version of it may be useful in explaining the appearance of bifurcate merging in groups with bilateral systems of descent.

Since the adoption of the horse, ecological readjustments, and attendent cultural changes had not brought about significant changes in the proto-Comanche-Northern Shoshoni kinship system, it is possible that the stability of the kinship system can be explained partially by the proto-Comanche-Northern Shoshoni retention of the older marriage practices. While many Shoshoni groups practiced cross-cousin marriage, the proto-Comanche-Northern Shoshoni restricted cross-cousin marriage and, therefore, gave no special terms to cross-cousins. Levirate, sororate, and sororal polygyny were quite common among them. These practices probably account for bifurcate merging within the kinship system. Steward (1938:284) has indicated that the Shoshoni groups who did not practice these marriage forms had kinship nomenclatures somewhat different from

the Northern Shoshoni (proto-Comanche).

In the pre-horse days the lack of consistency in post-marital residence and the frequent change of residence brought certain relatives into close association at some times and widely separated them at others. Thus, there was a great deal of ambiguity concerning the particular rights and obligations any one relative had toward another, and the patterns of behavioral relations between various kinsmen was never clearly defined.

This was not true of the kin relations within the bands and villages of the proto-Comanche-Northern Shoshoni. The role behavior manifested by the various classes of relatives, as far as available information indicates, was more or less consistent with the pre-Plains (but post-horse) proto-Comanche-Northern Shoshoni system of kinship terminology (Steward 1938: 197). The relations between brothers and sisters were about as warm as between parents and their children. There was little restraint between them though joking was not as extreme as between pseudo-cross-cousins of the same sex. Mothers-in-law and sons-in-law were not on the closest terms. Children had very special relations with their mother's brother and father's sister. For example, if a boy's parents died, the boy preferred to live with his mother's brother who took responsibility for educating him. There was also a warm relation between a boy and his father's sister who might assume responsibility for him if his mother died. Brothers-in-law (who were usually pseudo-cross-cousins) had joking relations with each other. Brothers-in-law might hide each other's clothing or ridicule each other's love-making abilities. A similar freedom existed between a man and his female cross-cousin, even though she might be married to another man. A man's closest friends were his cousins since they were considered his "brothers" and "sisters."

THE KINSHIP SYSTEM OF THE PLAINS COMANCHE

By the end of the 18th century a number of Comanche bands had completed their migration into the Southern Plains. Contacts with the Plains tribes, such as the Cheyenne and the Kiowa, and the new adjustments required in the new Plains environment brought about numerous changes in the socio-political organization of the Comanche Indians (Tefft 1961). Although the women still engaged in collecting and gathering pursuits, their economic activities had become less important while the subsistence activities of the men were far more essential to the survival of the tribe. Buffalo constituted the main source of food and raw materials for clothing and shelter. The warriors hunted these animals in large communal drives. As most Comanche families now had buffalo ponies and as buffalo were acquired more easily than in the pre-Plains times, these animals provided a fairly stable supply of food. While berries, roots, and seeds were necessary additions to the food supplies, they were not as essential for the survival of the group as in earlier times. Thus, woman's economic role, while necessary, was not crucial for the survival of the bands.

Warfare now played a more important role in the life of the Comanche. The Comanche went to war not only for booty but also for the love of fighting, for prestige, for revenge, and finally out of determination to take and hold their hunting grounds in the Southern Plains. The Comanche obtained horses, mules, and occasionally slaves in raids on settlements in Texas and Mexico. Revenge raids were also common. War raids gave young men aspiring to positions of high status in the tribe, opportunities to perform a number of heroic deeds which were necessary if they were to gain prestige.

However, the Comanche lacked any overall tribal unity. At no time during the year did the Comanche have any functioning tribal organization. They had no permanent tribal chief or council. In fact the bands came together only once - at the Sun Dance of 1874 (Wallace and Hoebel 1952: 22). Communal hunts and dances were carried on by the larger bands rather than by the tribes as a whole; the communal hunts were never managed by a police body as they were in the other Plains tribes.

While the smaller Comanche bands were composed of persons related by descent

and marriage, the larger band units contained several groups of kindred. Murdock has suggested that societies which concentrate the property in the hands of the men and give them the most important economic and political roles usually have patrilocal residence patterns (Murdock 1949: 206). This was true of the Plains Comanche. After their migration to the Plains the Comanche began to place more emphasis on the economic and military activities of the men rather than upon the activities of the women. Warfare also brought large quantities of horses, plunder, and sometimes slaves into the hands of the men. These changes in the social organization caused the shift from bilocal to patrilocal residence. Thus, settlements of kindred within the Comanche bands usually comprised a man's lodge and separate lodges for his wives, plus his son's lodges and those for their wives and other relatives. While it was customary for a man's daughter and her husband to live temporarily with her father after their marriage, the daughter eventually went to live more or less permanently in her husband's band.

In some societies increasing concentration of wealth in the possession of the men stimulates the formation of patrilineal descent systems (Murdock 1949: 206). Among the Comanche this was not so. Certain values held by the Comanche worked against this tendency; for example, altruism and sharing of goods were socially desirable traits. Thus, while the men owned more private property than the women, they had to dispose of a great deal of it in various social transactions. For instance, a fair share of a man's game supply went to old men, widows, or families with no hunters to provide for them. In time of great need stingy hunters were forced to give up their game since a needy person could claim a quarter of a hunter's kill merely by touching it. If there were many destitute people in the band, the hunter might be left with only the buffalo hide (Hoebel 1940: 119). Moreover, many Comanche families impoverished themselves by giving away most of their wealth at the death of prominent members of the family. People outside the deceased man's immediate family could lay claim to the person's property by providing grave gifts or by wailing until the deceased's relatives gave them the presents which they desired (Wallace and Hoebel 1952: 145, 152-3). However, the Comanche kindred never collectively owned land or resources as Murdock (1959:136, 140) implies. Thus, in spite of the patrilocal residence and the increased wealth acquired by the Comanche men, the descent system remained bilateral. The Comanche data suggest that in groups with strong values of altruism, a shift to patrilocal residence may not provoke a change toward a patrilineal descent system unless other factors are present.

While some aspects of the Comanche social organization changed after their migration to the Plains, the Comanche kinship nomenclature changed very little (Hoebel 1939). There was one self-reciprocal term for great-grandparent and great-grandchild and 4 self-reciprocal terms for the 4 categories of the grandchildren and grandparents. Father and father's brother were lumped together as "father", and mother and mother's sister were called "mother". The Plains Comanche gave separate terms to the mother's brother and the father's sister. They recognized 4 separate classes of older and younger brothers and older and younger sisters. These categories were extended to cousins. All the step-relatives were identified with actual ones. However, the Comanche no longer gave alternate terms to the father's older brother and his wife and the father's younger brother and his wife. Hoebel (1939:440) has shown that the Comanche and the Hekandika Shoshoni (Bannock Creek) kinship nomenclatures agree in 31 categories. There is also a close correspondence between the kinship categories of the Plains Comanche and those of the other Northern Shoshoni groups.

As the kinship nomenclature of the Comanche has not changed, it might be expected that the normative patterns of behavior between relatives, that is their role behavior, would remain much as in the pre-Plains days. This is, in fact, the case (Gladwin 1948: 83-4, 90-1; Wallace and Hoebel 1952: 126-7). While grandparents were responsible for a child's early education, the parents took responsibility for their child's training once the youngster had grown older.

The father coached his son in the art of war and the mother initiated her daughter in household tasks. A very special relationship existed between an uncle and his brother's child and an aunt and her sister's child. A boy could borrow his uncle's goods without asking and could usually count on his uncle's aid when he got into trouble. The aunt treated her sister's child in much the same way as the mother did. Siblings of the same sex enjoyed a close, warm relationship. Brothers might even share wives while sisters had warm but less definite relations. A sister and a brother had to avoid each other. They were forbidden to sit close to one another, touch each other, joke with one another, and discuss sex matters. Even so brothers and sisters protected each other and helped one another in any way they could. A man and his mother-in-law and a woman and her father-in-law did not avoid each other. However, men and women never discussed sex matters with their parents-in-law. Siblings-in-law of the opposite sex had joking relations with each other. Brothers-in-law also felt a close bond. They always exchanged insulting and coarse jokes with each other. Thus, as far as our knowledge indicates, the role behavior of the Comanche had not changed a great deal during the period of the Plains acculturation.

HISTORICAL PERSPECTIVE ON COMANCHE KINSHIP

Thus, while the adoption of the horse and the Plainsward migration of the Comanche Indians had brought extensive social, political, and economic changes in the old Shoshoni culture of the Comanche Indians, and while aspects of their social organization had begun to change, i. e. residence patterns and division of labor, the kinship nomenclature was generally resistant to change. Why was this the case? If we assume, as did Hallowell (1926:144-145), that kinship nomenclature is directly influenced by contact, then we would be forced to argue negatively that the reason the Comanche system of kinship terminology did not change was the fact that the Comanche were not in contact with tribes which had systems of kinship nomenclature different from their own. However, the Cheyenne and the Kiowa, with whom the Comanche were in intimate association, had kinship nomenclatures which were different from that of the Comanche, i.e. the Cheyenne made no age distinctions between cousins who were either "brother" or "sister"; and both the Kiowa and the Cheyenne classified fathers-in-law and mothers-in-law with grandfathers and grandmothers respectively (Hoebel 1960: 22-23; Eggan 1955: 42-46; Lowie 1923: 279).

Now Freed's study of Washo kinship suggests that role behavior is more directly affected by cultural changes than is social organization. But the Comanche data lends no support to this thesis. Some changes, though not extensive ones, took place in Comanche social organization; but only minor changes took place in the role behavior of kinsmen. However, it must be remembered that, while some variations in roles and relationships are possible within any type of kinship system, this does not mean that fundamental changes in the kinship nomenclature will come about as a consequence (Schneider and Homan 1960: 475-6). Nonetheless, the relatively stable normative patterns between the Comanche relatives was a factor which made possible the perpetuation of the older kinship nomenclature in the face of extensive culture change.

Moreover, the Comanche data indicates, as have other kinship studies, that changes in the various interrelated phenomena of kinship systems proceed at differential rates of speed. The Comanche case seems to support Murdock's hypothesis that changes in kinship nomenclature do not occur until certain other changes in social organization take place. According to this view, ownership patterns are more susceptible to changes in economy, technology, government, and religion than other aspects of social structure, such as descent systems (Murdock 1959: 146). While Murdock no longer believes that changes in residence patterns are necessary and sufficient conditions for changes in kinship terminology, he seems to feel that residence patterns react more strongly to external changes than do rules of descent or kinship terminology (Murdock 1959: 149: 1949: 221).

In the Comanche case these sequences of changes occur in much the way Murdock suggests. When the Comanche lived in the Basin (in both pre-horse and, as far as the information indicates, pre-Plains times too), they had a balanced division of labor, bilocal residence, bilateral groups of kin, bilateral descent, and Hawaiian nomenclature. After the Comanche migrated to the Southern Plains, their division of labor became patricentered, permanent patrilocal residence was the usual form, and they lived in patriresidential groups. On the other hand, they retained a bilateral descent system and Hawaiian kinship terminology. We have already noted the reasons for the Comanche retention of the bilateral descent in spite of patrilocal residence. Private ownership was more common than corporate ownership by extended families. Without changes in the descent system and forms of ownership, there was little possibility that extensive changes could take place in the system of kinship nomenclature unless the role behavior of kinsmen was altered profoundly. But as we have seen, the role behavior did not change extensively after the Comanche migration.

SUMMARY

Our historical study of the Comanche kinship system suggests that some of the current views on kinship phenomena must be modified while, on the other hand, the Comanche data do support some of the existing hypotheses regarding kinship change. The Comanche had a bilateral descent system but with bifurcate, merged mother-aunt terms. Since the Comanche never had a unilateral descent system, bifurcate merging can only be explained as a result of levirate-sororate marriage customs. During the period in which they acquired the horse and moved onto the Plains, the Comanche underwent an extensive period of acculturation; but their kinship terminology did not fundamentally change. Both in pre-Plains and pre-horse times the Comanche had a balanced division of labor, bilocal residence, bilateral groups of kin, bilateral descent, and Hawaiian nomenclature. After their acquisition of the horse and their migration to the Plains, the bicentered division of labor became particentered and bilocal residence changed to patrilocal forms; but the Comanche descent system remained bilateral and ownership was private or individualized. Since Comanche altruism prevented the permanent concentration of property in the hands of the men, patrilineal descent never developed. Consequently, the Comanche kinship nomenclature was not significantly affected by changes in social organization. Moreover, the role behavior of the kinsmen was not affected by the changes taking place in the economic and political organization. These unaltered kinship roles also gave stability to the system of kinship terminology.

[1] I am grateful to Professor Robert Spencer and Professor E. Adamson Hoebel for their comments on this paper.

[2] Historical explanations, as I understand them, are those which attribute differences between cultures to "unique" factors in their historical development. The delineation of "unique" historical factors is useful in explaining the cultural development of specific cultures but not in developing hypotheses which will give us a better understanding of cultural development in general (Service and Sahlins 1960: 12-44). However, information presented in studies of the cultural evolution taking place in specific societies is useful in evaluating hypotheses about general cultural development and can be used to modify and clarify them. Intensive studies of all instances which present exceptions to statistically validated hypotheses must be undertaken if we are to modify and refine hypotheses in such a way as to raise the coefficients of correlation to the highest possible degree.

[3] A culture process, as I understand it, is a pattern or configuration undergoing change over time.

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plains QUOTES

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MACHINE AGE ARCHAEOLOGY

Robert T. Babcock

During the seasons of 1957 and 1958 excavation was carried on at various sites. When it became apparent that construction of the dam had exceeded expectations and that filling to the 200-foot level would start in 1961, Dittert decided to mechanize the project. He acquired a tractor equipped with front-end hoist-shovel and back-hoe and a used dump truck. With this equipment he scheduled the approximate excavation of one pithouse each week. Perhaps two or three per season have been possible in the past, depending on the size of the labor crew.

During the first weeks of the season, the back-hoe was unaffectionately known as a five-toed monster or the "praying mantis," as the crew struggled to excavate without ruining walls, floors, and other features; but with experience it became possible to work within inches of an established wall so that one or two men with shovels and trowels could follow and protect the feature. By keeping the back-hoe about a foot above the pithouse floor, most artifacts were not disturbed. A man on the dump truck carefully watched the excavated dirt for sherds, bones, and other artifacts that were missed by the men in the pit. In this manner, late in the season, a twenty-foot pithouse, seven feet deep, was cleaned out except for the ventilator shaft in slightly less than five working days. From it were salvaged some forty-six specimens. Dittert tells of one case where only two days were needed to clear one of these structures. With these new techniques, the largest excavation at a pithouse village ever undertaken in the Southwest was accomplished in one season. And this was only one of twelve sites excavated during that season by the Navajo Project crews.

Much of the success of the project can be attributed to the training of, and response from, the labor crew. They became real "pot hunters" with sharp eyes and a delicate trowel touch. Louis Quintana, the tractor operator, thought nothing of working within three inches of a wall, but considered it a personal catastrophe if he left marks on that wall.

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plains QUOTES

THE COMANCHE BRIDGE, 1843-1844

Ralph A. Smith

On its way south the well armed Comanche Horde divided. One party took the eastern trunk into Tamaulipas. The other three hundred rode down the Alamito valley on the western. They crossed the Rio Grande in the first week of October. Troops in the posts along the River did not bother the invaders. They reached La Cruz del Refugio 75 miles southeast of Chihuahua City on October 15. The warriors killed a woman and stole a horse herd. They also left some horses they rode for the Mexicans to have in good shape when they called again. The Indians abducted Ramona Romera, 16; Eulalia Romero; Domingo Garcia, 14; Bonifacio Gonzales, 15; Crescencio Corral, 10; and Eulalia Nunoz, 15. The Comanche left La Cruz following roughly the present Pan American Highway. Col. don Mauricio Ugarte took the trail behind them with 250 men.

West of Santa Rosalia de Ciudad Camargo the Comanche observed a large Mexican army moving to attack them early on the morning of October 16. Seeing nearly 600 soldiers, the Indians fled up a sierra north of Ojo Caliente. They divided and came down into 2 parties. The Mexicans tried to divert them from Durango, but failed. The nomads continued down the Rio Parral Valley picking up captives as they went. Alarming reports preceded them. Companies of soldiers rushed here and there. On the basis of an erroneous figure which placed their number at 2000, Gov. Heredia ordered a mobilization of all forces in Durango.

In his Department, Comanches sacked and burned houses and took off horses and mules on don Francisco Figueroa's Amador ranch on the Upper Rio del Oro Valley on October 20. Many of his servants reached his ranch house, but the raiders slew the wife and 2 little sons of don Ignacio Oritz and abducted his two daughters, Maria Remigia, 24, and Marcelina, 3. The marauders snatched Perfecto, 12; Saturnina, 21; and Petra, 13, from the home of Clement Hernandez. They got Thomas Reyes, 11; Nestor Rivera, 10; Luis Olguin, 8; Patricia Pillado, 10; and Maria del Rosario Ceniceros, 12, of other families.

Moving on, the nomads destroyed a pack train, killed 4 drivers, and seized 700 pesos in coins. At Sestin ranch also in del Ora Valley they murdered 3, kidnapped a woman and 2 boys, and drove off the horses. Around the Castaneda ranch they got many more horses and littered the ground around Arroyo de Sardinas with dead cattle and burros. Comanche policy was to spear cattle, sheep, goats, hogs, and other domestic animals too slow to keep up with their droves.

The horse rustlers began their days early and actively. On the 21st they started out with taking the mules of don Juan Jose Ruiz at Agua Caliente, then those of don Jose Maria Celis. No where did they meet any resistance until six tried to run off the mules of don Transuilino Sanchez Alvarez on San Pedro ranch. When soldiers and citizens charged them, they fled, and another band swooped a mule drove from a pasture. These small parties combined, and don Tomas Carrete said that they numbered over 500 when they passed through Los Sauces de Cardona. Other Mexicans confirmed his story that they carried a captured benefice with them.

The warriors kept the prelate dressed in his frock, pantaloons, and gloves. They forced him to make mock confessions to a wounded captive. The warriors carried along a sort of Indian Joan of Arc to inspire them in battle also. She wore an elaborate garb and rode a big horse with much trapping. They sported an ensemble of musical instruments sufficient for a regiment according to Carrete. These included flutes and cornets. From some 20 instruments they sent forth a stream of discordant sounds. In the intervals of revelry, they lanced calves and shot farm poultry with arrows. The marauders made a sweep of the children before leaving.

Dashing across country again they left smoking houses and panic in their wake. At villages on El Corral de Piedra ranch, they repeated the same old story, 4 dead, 2 boys kidnapped, cattle and sheep lanced, and horses and mules stolen. Joaquin Martos and over 30 men from Santa Maria del Oro chased around pretending to protect the people, but they really seemed more concerned with staying out of sight of the Comanche. The Indians went right on with their brokerage business of collecting livestock and slaves.

The Comanche surrounded Magistral in the edge of a sierra but did nothing new, just the routine of killing the men, grabbing the children, sacking the houses, and driving off the livestock. When Martos slipped in after they had left he found old and young weeping for the dead and lost. Breaking up into small parties, the raiders visited villages large and small over a great area. What the Justice of the Peace of San Bernardo reported about them cleaning the country of animals, scattering the people, and leaving the population "afoot, helpless, and miserable," did not tell half the story.

MUSEUMS AND COLLECTIONS

Edited by Wesley R. Hurt

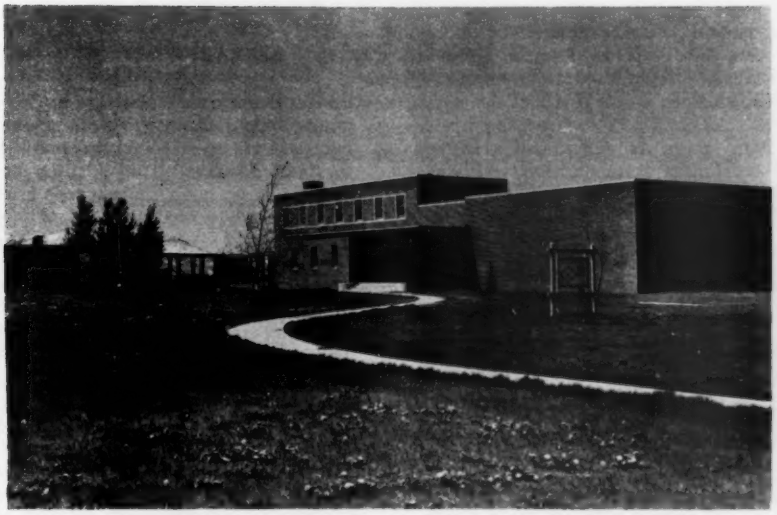

Fig. 7 - Museum of the Plains Indian - Claude F. Schaeffer, Director

LOCATION

Because of its geographic position, the Museum of the Plains Indian is well situated to recreate and portray the life of the Plains tribes in buffalo days. Located near the center of the Blackfeet Reservation, the Museum lies immediately west of the town of Browning, Montana, at the junction of Highways 2 and 89. Also at Browning is the Blackfeet Indian Agency. East Glacier, the entrance to majectic Glacier National Park, is only 12 miles west on Highway 2. Thus the Museum virtually lies within the shadow of the Rocky Mountains in the heart of what is old Blackfeet territory.

OPERATION

The Museum is maintained and operated by the Bureau of Indian Affairs, a branch of the U. S. Department of the Interior. General supervision is exercised by the Blackfeet Indian Agency.

BUILDING AND GROUNDS

The Museum and its grounds cover an area equal to nearly 2 city blocks. Occupying a well-designed, modern, two-story, brick structure, the Museum itself contains adequate space for exhibition, storage, and related facilities. In 1941 the building was first opened to the public.

PURPOSE

Originally the purpose of the Museum was to aid the Blackfeet and other Plains tribes in reviving their old, native arts and crafts and to provide an outlet for their sale. While this function is still paramount, it has become possible to so broaden the Museum's scope as to include other activities, such as research, publication, etc.

EXHIBITS AND COLLECTIONS

Exhibits in the Museum are designed to portray the life of the Plains Indians "in the days when buffalo ran." With its more than 5000 sq. feet of exhibition space, the Museum has ample room in which to organize its displays.

As the visitor enters the building, his attention is caught by the large, wood panels over the doorways depicting scenes of aboriginal Plains life. These low-relief pieces were

done by John Clarke, skilled deaf-mute wood carver of Blackfeet descent.

Inside the spacious lobby the visitor's eye is immediately drawn to the colorful murals portraying different phases of an Indian buffalo hunt. Vivid reminders of a now vanished life, these scenes were executed in secco fresco by the late Victor Pepion (Double Shields), talented Blackfeet artist, who tragically lost his life in a fire in 1956.

In the right of lobby is located the main exhibition hall. Here are arranged a series of life-like dioramas, interspersed with displays reflecting various aspects of early Plains Indian life. Camp activity, role of the buffalo, introduction of the horse, riding gear, art expression, costumes, pipes and tobacco, raiding and warfare, weapons and counting coups are some of the topics delineated.

Leaving this area the visitor crosses the lobby to enter the Hall of Religion. Here the beliefs and practices of Plains Indian religion are represented by graphic and audio-visual means.

The visitor next proceeds to the Prehistory Room, where the results of Museum archaeological field work are placed on display. Eventually, it is hoped that remains of the different peoples who have occupied the Plains in the last 10,000 and more years can be arranged here.

Each year the Museum presents a number of current exhibitions, such as the Winold Reiss original portraits of Blackfeet Indians. There are Plains Indian Sign Language and Medicine Rock displays on the Museum grounds.

The Museum exhibitions are built around materials from its extensive collections of authentic Indian specimens. Among the best known are the Margaret Taggart, the Frank Linderman Estate and the Louis W. Hill Memorial Collections, the last of which was presented to the Museum in 1952 by the Great Northern Railway.

ARTS AND CRAFTS

Having viewed the exhibits, the visitor next makes his way to the Arts and Crafts Shop, a large sales room occupying the central-rear portion of the building. Here is located the merchandising center for the Northern Plains Indian Crafts Association, a government-sponsored organization composed of native craft groups from various reservations in Montana and Wyoming. Authentic articles fashioned according to the best traditions of native craftsmen are assembled in the shop for sale. That high standards of workmanship are maintained is evident from the displays of traditional and modern crafts located in the main lobby.

The Blackfeet Craft Group, a member of the Association, has its office, workrooms and storage space in the Museum as well as a summer sales shop at St. Mary's in Glacier National Park.

RESEARCH AND PUBLICATION

Almost from its inception the Museum has carried on a study program on the life and customs of the historic Indians of the Northwestern Plains. The results of these inquiries have been incorporated into exhibitions or made available in various journals to interested students and the general public.

Since 1952 the Museum has been engaged in a program of archaeological investigation of the buffalo drives, stone tipi rings and other prehistoric features of the High Plains The material from these surveys and excavations is presented to the public in both exhibits and publications. Research grants from the Hill Foundation have made possible archaeological field projects since 1954.

In the way of publications the Museum has brought out several issues of the NEWSLETTER annually, and is now planning a professional series to present its findings in Plains ethnology, archaeology and ethnohistory.

LIBRARY AND ARCHIVES

The Museum Library houses a collection of books, pamphlets, photographs, maps and other documentary sources on the ethnology and history of the Plains tribes. This material is increased yearly by new additions.

In 1953 the Museum was fortunate to acquire the original Blackfeet Agency records from 1873 to 1921, which represent for students a rich source of historical information on the Blackfeet Reservation period. This archival collection is being expanded by additions of new material from National Archives and elsewhere. As our collections of documents and specimens grow, the Museum will become a center of research on the Plains Indians.

THE STAFF

There is a resident curator at the Museum throughout the year, with assistants appointed in archaeology and archival work each summer. During the summer the hours are from 8:00 to 5:00. Docent service is provided for visiting school classes and other groups upon adequate notice.

THE LIAN SITE, AN HISTORIC LOG SHELTER IN YELLOWSTONE COUNTY, MONTANA

Abstract

Thomas and Alice Kehoe have recently reported on an example of a Blackfoot clay vessel (Kehoe 1961). Their specimen is most interesting due to the fact that it is sun-dried and exemplifies a very late carry-over of the Blackfoot pottery tradition. The Kehoes postulate that this and similar-type specimens were used as specialized containers for the burning of sweet pine before medicine bundles. In support of this contention, and as a probable archaeological example of this practice, the author reports on the occurrence in central Montana of a similar-type vessel which was found in a burned-out log shelter of possible Blackfoot construction. The find is analyzed in the light of Blackfoot-Crow relations during the 18th and 19th centuries.

During 1956, while doing field work in the Bull Mountain Basin of central Montana, the writer observed a rectangular, burned outline on the edge of the southward facing, sandstone rimrock exposed in Section 32-5N-28E, Yellowstone County. This location is between 2 of the upper forks of Pompey's Pillar Creek, approximately 15 miles northwest of its confluence with the Yellowstone River. The site will be referred to hereafter as the Lian site, named after the early homesteader of the land.

Poorly constructed log shelters have been previously observed in this region (Mulloy 1945 and 1952), and it is probable that they represent the remains of temporary shelters constructed for use by small hunting parties or war parties. Mulloy discusses and illustrates examples from the Thirty Mile Mesa area which is located approximately 30 miles north of Billings, Montana, or approximately 9 miles northwest of the Lian site (Mulloy 1952). He refers to several shelters of irregular ground plan constructed of either vertically-stacked or horizontally-laid log walls, usually stablized around their periphery with sandstone slabs. Portions of the log walls are still preserved in the Thirty Mile Mesa shelters due to the fortunate fact that the mesa top has never been burnt-over by either natural or human agency since the shelters were constructed. Contact material was excavated from the floor deposit of one of the shelters and includes a bead made from a clay-pipe stem and a gun flint. A more extensive artifact assemblage is listed by Mulloy for the immediate occupation area; however it should be noted that Thirty Mile Mesa has been used as a camping spot by aboriginal groups for several thousands of years, and cultural material from diverse sources can therefore be in close juxtaposition. Nevertheless, contact material is extremely rare on the mesa; and it is notable that the above examples were found in the occupation debris within the wall outline of the shelters. If these are temporary shelters, it is logical that artifacts should be practically non-existent in the floor deposits; and this condition was found to be present within the wall outline of those shelters excavated on Thirty Mile Mesa. Mulloy reports that both paddle-marked and smooth, utility ware sherds of Mandan-Hidatsa tradition were found in the area adjacent to these shelters, but that in no case was one of these sherds found in the floor-fill of a log shelter.

The Lian site presents a much less complicated picture since a single occupation is represented. The sub-rectangular plan of the burned shelter is clearly preserved as a red, oxidized outline on the surface of the rim rock. Its form is further indicated by the presence of the sandstone slabs which originally stablized the periphery of the walls. These sandstone slabs are also heavily oxidized due to burning. The outline is roughly rectangular, 24' from east to west and 26' from north to south. The northwest and southwest corners are slightly rounded. There is no direct way of judging whether the log walls were composed of vertically-stacked or horizontally-laid components. Both types are preserved on Thirty Mile Mesa, just 9 miles to the northwest, and it is possible that both types were used by the same people with selection depending on the physical setting of the building site and the availability of long or short logs. Horizontal orientation may have been used where long logs were readily available, with the shorter lengths being better suited to vertical stacking.

The large size of the Lian shelter suggests that it was never roofed; and the rim rock

floor exhibits no evidence of oxidization within the wall outline, a fact which also supports this suggestion. The absence of any roof timbers in the shelters on Thirty Mile Mesa serves as direct evidence in this regard. This feature of shelter design further supports the postulation that a temporary dwelling was intended and that shielding from view and shelter from the wind were the prime reasons for construction. Such design is completely functional with no evidence of the incorporation of features normally present in the permanent dwelling of a particular ethnic group. It is impossible to pick a definite entrance location for the shelter since the slab-rock outline is presently discontinuous at several points due to irregularities in the rim rock floor.

The rim rock floor was practically clear of all debris. The anomalous exception was a shallow, sand and dirt-filled fissure in the sandstone closely parallel to the north wall. This fill was excavated since it presented the only possible repository for cultural material. Imbedded in the fill was a hat-shaped clay vessel exhibiting very thick walls and a thick, flat bottom, (Fig. 8). It is made of brick-red, earthy, granular clay. No tempering material is to be observed. However, the clay is poorly graded, and there is variation in particle size with a considerable amount of impurity present. (Its form is best described as hat-shaped when viewed in the inverted position). It is crudely shaped and has a round form with a flat bottom. The rim is flat and slightly flaring along its outer periphery, and the body decreases in diameter as it tapers downward. No decorative features are present. Dimensions for this container are as follows:

Height 3.9"
Diameter across top of rim 7.3"
Diameter across body just below flared rim 6.5"
Diameter across flat bottom 5.7"
Average wall and bottom thickness 1"

Fig. 8 - Clay Vessel, Lian Site

It was found in an inverted, slightly inclined position within the fissure filling, and it was quite apparent that it had fallen to this location from its original position between the logs of the northern wall. It had quite probably been placed in this position for out-of-the-way storage, which suggests that the walls of the shelter were laid horizontally. Its fall apparently took place during the burning of the shelter since it had obviously never been moved from its find-position. This lack of disturbance is clearly evidenced by the fact that the only other cultural objects found within the shelter outline consisted of a ground, partially polished hematite concretion, and a musket ball of approximately 55 caliber (probably 28 gauge), both of which were found in the fill immediately under the clay vessel. It can be reasonably assumed that these objects were within the container when it was in place in its wall position. This site can be placed in the historic period by the presence of the musket ball, and this correlation is consistent with the evidence found at Thirty Mile Mesa in the floor-fill of a similar shelter. The container was probably not fired in its original condition; however, this factor cannot be definitely evaluated since the vessel has been subjected to a considerable amount of heat due to the burning of the shelter. This burning is observed on all parts of the vessel with actual smoke blackening; however, it clearly exhibits heat effects which decrease in intensity as the bottom interior is approached. The bottom interior is quite earthy and fresh in appearance and strongly suggests that this decrease in firing is due to its relative protection from ascending wall flames.

It is postulated that this container was made from local material. In the central portion of the Bull Mountain Basin, coal beds of Tertiary Age have burned at the out-crop to form a red, oxidized earth and clinker deposit. These deposits provide material of the same type and color as that used in the container; and after due consideration is given to the context of the occurrence, it is logical to suggest that the container was made from such local material. This vessel is quite heavy and, if it originally had been sun-dried, its safe transportation would certainly have presented a problem.

It is now relevant to this analysis that consideration be given to the geographic position of the site in relation to the various ethnic groups occupying and contending for this area. The Crow Indians have apparently occupied south-central and southeastern Montana since the late 1700's and during this period have been the dominant ethnic group within the specific south-central Montana area under consideration (Hodge 1907, Pt. 1, P. 367;

Lowie 1918, p. 272). Their range was much more extensive although the south-central Montana area was home-ground; and if a raiding party wished to make contact with the Crows, this portion of Montana between the Big Horn Mountains and the Yellowstone River was the first and best place to search for them. By the middle 1800's, shortly after arrival in this region, the Crow tribe was known to have been divided into 2 divisions called the Mountain Crows and the River Crows. The former ranged over the higher ground adjacent to the Big Horn and Pryor Mountains, while the River Crows favored the Yellowstone River Valley just to the north. From a gross point of view we may, therefore, place the Lian site in the northern portion of the Crow domain, just 15 miles up a northern tributary of the Yellowstone River.

The Crow tribe was a significant force in the southern portion of one of the finest buffalo hunting grounds in the Northern Plains, a hunting ground which covered central and east-central Montana. In this region the so-called "northern herd" of buffalo often concentrated during the 1800's until it was destroyed by white hide-hunters in 1882 (Roe 1951; Hornaday 1889). The use of this asset by the Crows was vigorously contested by all groups peripheral to the area, and the Crows were almost continually at war with various tribes during the historic period. Their most hated and aggressive enemies were the Blackfeet to the northwest and north, and the Sioux to the northeast and east.

As analyzed above, it is probable that the Lian shelter was constructed for temporary usage. As its location only 15 miles north of the Yellowstone River rather precludes a Crow Indian origin, it is believed that we must look to another tribal group for its origin. We are indeed on tenuous grounds at this point since temporary log-wall shelters were undoubtedly made by almost all groups in this region during the historic period. Mulloy quotes Crow Indian informants (1952: 133) to the effect that all tribes which they knew constructed shelters of both horizontally and vertically placed logs, though the Blackfeet preferred the horizontal type and the Arapahoe, Arikara, Assiniboine; Cheyenne, Flathead, Gros Ventre, Hidatsa, Mandan, Nez Percé, Shoshoni (Wind River), and Sioux preferred the use of vertically placed logs in a tipi-like structure. This belief may or may not be entirely correct, and certainly the dictates of terrain and availability of construction material should preclude any definite rule in this regard. It is of interest, however, to note that Mulloy's informants equate horizontally-laid log walls with the Blackfeet.

It is the author's belief that the strongest evidence favoring any particular ethnic group is provided by the clay container found within the wall outline of the Lian shelter. Archaeological data from the Northern Plains provide numerous examples of the manufacture of technologically advanced, utilitarian pottery that is intentionally fired. Apparently this pottery tradition was rapidly discarded near the beginning of the historic period when metal containers became available from the early traders. Ewers' collection of ethnological data (Ewers 1945) concerning historic Blackfoot pottery produces a picture of a degenerate type of thick and heavy, molded bucket-forms which were sun-dried and completely divergent from the prehistoric pottery found on archaeological sites (Kehoe 1961:43). It is, therefore, no wonder that few examples of late Blackfoot pottery are available for study. Their pottery techniques apparently retrograded so completely that the resultant product became technologically incompetent and impractical. The Kehoes' recent use-analysis of an unfired clay vessel found on the Blackfoot Reservation (Kehoe 1961) provides a very satisfactory and logical explanation for a late carry-over of Blackfoot pottery in a degenerate type form. They and their informants rationalize that it was used as an "incensario" before medicine bundles by one of the survivors from the pre-reservation era who still insisted on the use of a clay container such as his father used for this ceremony. Since the Kehoe specimen is generally similar in form to the Lian site specimen, there is considerable circumstantial evidence to indicate that the clay container from the Lian shelter was similarly used by a small Blackfoot war party.

It is probable that other temporary shelters of the Lian site type located just to the north of the Yellowstone River were constructed by Blackfoot war parties, since this location is ideally situated as a base for raiding operations. There is, however, enough diversity in the shelter types in this region to indicate that more than one tribe is responsible. This is a natural condition since several tribes were at war with the Crow during this same period.

The Lian shelter represents a vignette of history from which we can derive some knowledge and clarification of the ethnohistory of the Northern Plains. This subject needs much additional clarification, and minor sites such as the Lian shelter can aid in this process. This type of site is easily destroyed and is often unrecognized due to its simplicity and isolation. The ethnohistory of the Northern Plains and the Northern Rockies has received very little attention, and there have been

many instances of important data from these regions being lost in the limbo of non-communication. It is important that more space be provided for recording data from such minor sites, since most archaeological sites in these regions are small and provide thin occupational levels.

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CONCERNING THE ASSUMED L-SOUND IN ARAPAHO

Abstract

The note is a denial of the assertion by others that Arapaho has an l-sound.

In his well-known paper "Algonquian" (in Hoijer and others 1946: 85-129), the late Leonard Bloomfield gives l as the Arapaho reflex and n as the Atsina (Gros Ventre) reflex of Proto-Algonquian l (p. 87). Gleason (1955: 341) in his exemplification of the comparative method by the reconstruction of some Proto-Central-Algonquian consonants follows Bloomfield and goes one step further: "One reason for choosing the symbols [*Θ] and [*l] is that Arapaho has these correspondences as /Θ/ and /l/, and that many other languages have /l/ for [*l]."

The 2 assertions quoted above, which to my knowledge have never been explicitly corrected, are in serious error - there is no l in Arapaho. The fact of the matter is that Gros Ventre and Arapaho do not distinguish in the treatment of Proto-Algonquian l, both changing it to n. Examples: *wēlenwi (Michelson 1935: 148), Ar. niinén (Salzmann 1956: 56) 'fat'; *elenyiwa (Bloomfield in Hoijer 1946:87), Ar. hinén (Salzmann 1960: 44), Gros Ventre hineni (Kroeber 1916: 75) 'man'; *nalakačkwi (Bloomfield in Hoijer 1946: 89), Ar. nonóuo? (Salzmann in unpublished field notes) 'my palate'; *nemelāmekwa (Michelson 1935: 163) 'he smells me', Ar. beenóówoot (Salzmann 1960: 45) 'he smells him'.

It is reasonably certain that none of the dialects of the Arapaho division (Salzmann 1960) possessed an l. Kroeber (1916: 76) recorded 2 instances of l in Nawathinehena words, but felt it necessary to comment on it as follows: "An l was recorded, but seems doubtful, as the Arapaho ordinarily are unable to pronounce this sound. The word for 'rain' in the same dialect [i.e., Nawathinehena] was, however, recorded both as hã^{n}sivaxta and hä^{n}silaxta". From the limited material that Kroeber collected on Nawathinehena it appears that this dialect departs from all other dialects of the Arapaho division, as where they have n for Proto-Algonquian l, it shows t.

One of my informants commented in this

connection that old Arapaho speakers who have few or no teeth left frequently produce an l-like sound in certain sequences in which the uncorrupted Arapaho has an n, as in holóh?e for honóh?e 'man'. This fact may very well account for the 2 aberrant forms recorded and mentioned by Kroeber.

As has been reported in detail (Salzmann 1956 and 1961), Arapaho phonemes are: b, t, č, k, ?; Θ, s, x, h; n; w, y; i, e, u, o. In addition, every vowel phoneme in Arapaho is associated with one of 2 prosodemes---high level pitch (marked in my phonemicization by an acute accent) and low level pitch (unmarked). No allophone of any of the phonemes listed above bears even remote phonetic resemblance to an l-sound.

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PREHISTORIC BLACKDUCK - HISTORIC ASSINIBOINE: A REASSESSMENT

Abstract

Previous evidence has suggested to scholars that the prehistoric Blackduck focus of the Headwaters Lake Aspect of Minnesota corresponded with the known movements of the Assiniboine from the headwaters of the Mississippi to the Lake of the Woods. New data in respect to burial, pottery, traditional and historical distribution are presented to negate this idea of Dakota origin. Instead the author suggests an Algonquin development.

L. A. Wilford (1945) and R. S. MacNeish (1958) have suggested that the Blackduck focus, a late Woodland archaeological manifestation found in northern Minnesota, northwestern Wisconsin, and central Canada, is associated with the historic Assiniboine. Wilford bases this association on the following, "If the Headwaters Lake culture is as late as it appears to be, the people responsible for it may in all likelihood be known historically. Although the writer has not definitely established a contact between the prehistoric Headwaters Lakes culture and that of any known historic tribe, in the light of the facts now available he believes the Assiniboine to be the historically known tribe most likely to have created the culture. He agrees with the statement of David I. Bushnell, Jr., who writes: "It is quite evident the Assiniboine, about the first years of the 17th century, moved northward from the densely forested region surrounding the headwaters of the Mississippi, where they had formed a division of the Yanktonai (Sioux), to the vicinity of the Lake of the Woods and beyond, where they soon became allied with the Cree. They continued to move northward and westward, and by the close of the century were living in the region about Lake Winnipeg" (Bushnell 1927: 42). The known movements of the Assiniboine from the headwaters of the Mississippi to the Lake of the Woods correspond with the distribution of the Headwaters Lake Aspect in Minnesota.

"Granting that the Mille Lacs Aspect is a manifestation of the Sioux tribes, similarities between Sioux and Assiniboine pottery would be expected, and such is the case. One of the great differences between the 2 aspects is found in the manner of burial, the Mille Lacs Aspect burials being predominantly secondary burial, and the Headwaters Lakes predominantly primary burial and often in a sitting position. Could it be expected that the Assiniboine, originally a Sioux tribe, would have so changed their burial practices? It is known that they did; for one of the earliest accounts

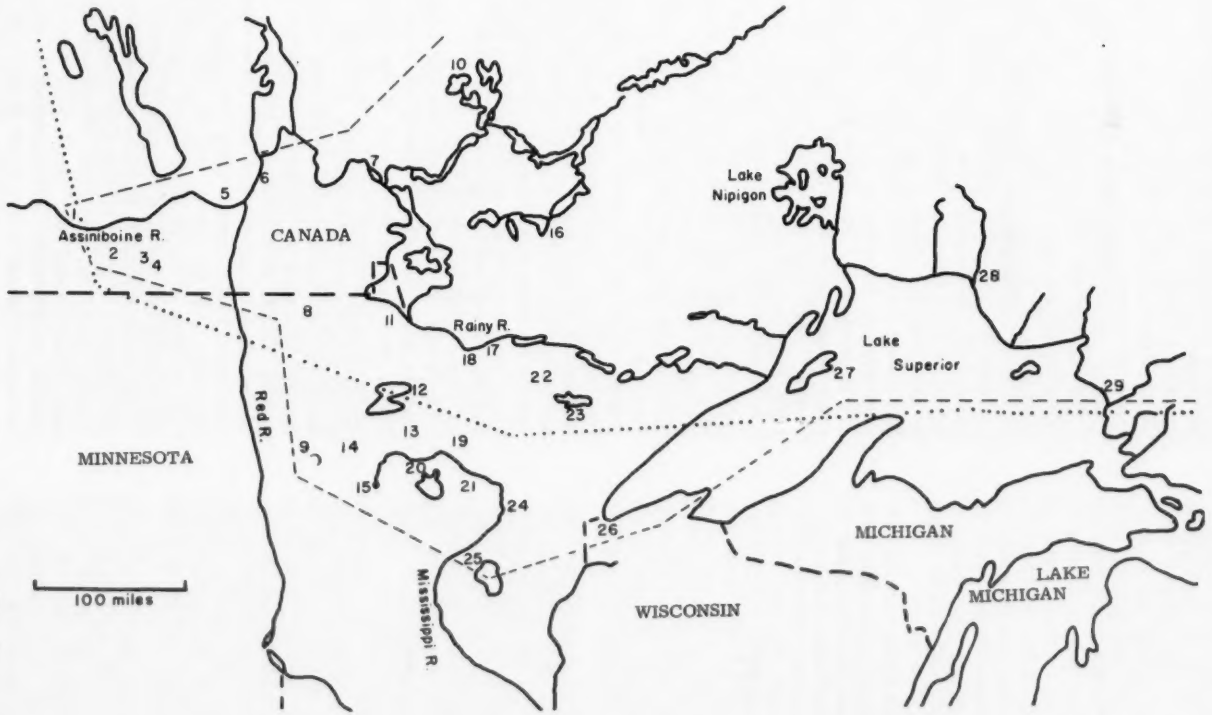
of Assiniboine burials in 1775, recorded by Alexander Henry, the elder, (Quaife 1921), reveals that burial was made in a grave "of a circular form, about 5 feet deep and lined with bark of the birch, or some other tree, or with skins. A seat was prepared," he continues, "and the body is placed in a sitting posture with supporters on either side." According to Henry, the Assiniboine considered it a serious duty to place dishes of food in the grave "for the use of the dead, on the journey to the land of souls" (Bushnell 1927: 42-43) - a practice that might account for the mortuary bowls found in the graves of people of the Headwaters Lakes Aspect. In view of known evidence, it is possible that the Headwaters Lakes Aspect represents the culture of the Assiniboine in the 17th century (Wilford 1945: 328-329).

MacNeish bases his identification on much the same basis - Henry's description of a burial practice - and also on a comparison of a surface collection from an area near Fort LaReine "at the junction of Portage Creek and the Assiniboine River" (MacNeish 1945: 49). The fort was built by LaVerendrye for the Assiniboine; and for this reason the surface collection which is similar to the site MacNeish discusses, the Scott site, is supposed to be Assiniboine.

In making their analysis, several factors were overlooked; and one factor which may have been unknown to either of the authors enters into this problem and fails to support the above conclusions. In Wilford's statement he uses the movements of the Assiniboine in relationship to the geographical distribution of the Headwaters Lakes material. In that the two, in part, coincide is right. What he fails to point out is the eastward distribution of the Blackduck material in Minnesota beyond the range of the Dakota groups, that is the Nett Lake and Lake Vermillion areas.

Wilford also states that one would expect similarities in pottery between the Dakota-Mille Lacs and the Assiniboine-Blackduck material; these he does see. That there are some similarities between Mille Lacs Aspect and Headwaters Lakes material has already been pointed out (Evans: 1961). We see that in ceramics Mille Lacs and Headwaters Lakes Aspects share 2 traits, cord-wrapped paddle body treatment and cord-wrapped stick; the Rainy River and Headwaters Lakes Aspect share one, the motif tradition. There is one trait which the Headwaters Lakes Aspect has which is not shared with any other Woodland Aspect in Minnesota i.e. vessel form. However, it would seem that there should be more than merely ceramic characteristics involved in such a connection. We see that Headwaters Lakes-Mille Lacs Aspects share 3 traits, the 2 ceramic traits above and triangular projectile points, and that Headwaters Lakes-Rainy River Aspects share 6, ceramic motif, burial practices, unilateral barbed harpoons, socketed bone projectile points, cut beaver incisors, and mortuary goods with burials. This total list seems to indicate that the Rainy River-Headwaters Lakes relationship appears to be the most probable, especially when considering the continuity that is seen in the progressive change from Laurel to Blackduck ceramics. The Laurel-Rainy River material is not considered to be Dakota. In addition, the geographical distribution of the Rainy River and Headwaters Lakes Aspects coincides to a greater degree than does the Mille Lacs-Headwaters Lakes.

In terms of the burial practices, the problem is very difficult to solve adequately. It seems that the Assiniboine would have had some of the most inconsistent views of burial practices recorded if Bushnell's estimate of the time when the Assiniboine broke with the Yanktonai and Wilford's and MacNeish's Assiniboine-Blackduck association are correct. If the above is correct, then within the space of 200 years, the Assiniboine made 2 major shifts in their burial customs. After breaking away from the Yanktonai, the Assiniboine gave up, for the most part, secondary bundle burials and began to practice primary burial. Then after taking up the Plains nomadic life and some of the typical Plains horse culture, they returned to secondary bundle burials (Lowie 1909: 41). While such a change is not impossible and very well may have occurred, the author does not think this was the case. The quotation from Henry which is supposed to prove this fact is interesting from several points of view. First of all, within the body of the quoted text, which occurs in a chapter devoted to "Customs of the Red Man" and which deals primarily with the Osinipoilles, or Assiniboine, Henry notes that the Algonquin word "totem" is used for the badge which is affixed to a post above the grave (Quaife 1921: 294). It is rather strange, if he is describing a Dakota practice, that he should use an Algonquin word to designate a feature, unless the practices being described are actually Algonquin in nature. Secondly, and of more importance, is the fact that 3 pages before this quotation Henry qualifies the following pages with this statement: "I shall venture to set down such particulars as have presented themselves to my immediate view. Though inserted here they have no exclusive relation to the Osinipoilles, all the Indians whom I have seen having similar customs on this head" (Quaife 1921: 290). The underlining is that of the present author. Immedi-



1. Scott (M)
2. Kreiger (M)
3. Avery (M)
4. United Church (M)
5. Rosser (M)
6. Lockport (M)
7. Toukko (M)
8. Roseau (S)
9. Crookston (S)
10. Red Lake (S)
11. Wheelers Point (S)
12. Waskish (E)
13. Schocker-type site (E)
14. Upper Rice Lake (S)
15. Hill Point (E)
16. Souix Lookout (S)
17. McKinstry Mound (W)
18. Smith Mound Three (E)
19. Osufsen (E)
20. Cass Lake (S)
21. Mud Lake (E)
22. Nett Lake (E)
23. Pike Bay (W)
24. White Oak Point (W)
25. Kathio (W)
26. Clam River (C)
27. Ile Royale (S)
28. Pic River (S)
29. Monteral River (S)

-------Limit of Blackduck Distribution .....Algonguin-Cree Distribution

Fig. 9 - Blackduck focus sites and the limits of historical Algonguin distribution

ately after the passage on the burial customs, Henry makes it clear that he is once again dealing exclusively with the Assiniboine with the statement, "The men among the Osinipoilles are well made" .... (Quaife 1921: 295). In the intervening pages no tribal designations appear. On this basis the author would express some doubt that the burial practices as described were those of the Assiniboine, especially in the light of the fact he used an Algonquin term rather than a Siouan term to describe part of the practices. Also, it should be noted that no Siouan words were used.

As for the interpretation of the surface collections made by MacNeish in the area, with no specific locality given, of a fort built by LaVerendrye for the Assiniboine, some questions arise. If he had found Paleo-Indian material at the Scott site and near the fort in question, does that mean that the Assiniboine were Paleo-Indian or that LaVerendrye was dealing with Paleo-Indians? The writer is sure that is not MacNeish's implication - he meant, instead, that the surface collections and the excavated material from the 2 areas might be Assiniboine, although this is not made very specific.

The final factor, which is perhaps the most definite evidence against the Assiniboine-Blackduck relationship, is the geographical distribution of Blackduck (Fig. 9). Manifestations of this focus are found in northwestern Wisconsin, northern Minnesota, eastern Manitoba, and in Ontario from the Montreal River west around the north shore of Lake Superior. (Cooper, Keyon, MacNeish, Wilford, Wright). The eastward and northern limits of this distribution are far beyond the Dakota territory which is traditionally located in central Wisconsin and Minnesota. That the Dakotas and Assiniboine may have been in the area on occasion, is undoubted; but in terms of historical knowledge and Indian traditions, they never lived in the areas around the north shore of Lake Superior.

If, as the writer believes, this focus cannot be Dakota in nature when all the factors are considered, there is only one group which could have such distribution, that is, an Algonquin speaking group. If it is necessary to go beyond this general grouping, the most likely of the Algonquin groups to have such a distribution would appear to be the Crow. The northwestern Wisconsin location is outside the usual Cree area; but from what can be gathered from the literature, the amount of Blackduck material is very small (Cooper 1958). In addition, Bushnell records that the Algonquin burial practices are primary burials, and in some of the eastern groups a common form is a flexed sitting burial in a pit (Bushnell 1920). The development of the Blackduck focus from a non-Dakota archaeological aspect in the northern part of Minnesota - in an area usually considered to be Algonquin - also points toward this conclusion.

The fact that the Cree and other Algonquin speaking groups were known to be present in Minnesota from the earliest contact times onward is well established. Wilford has summarized the available material in his 1937 work: "The Cree cannot be said with certainty to have lived any great distance south of the Canadian border. Apparently during this period (1634-1736) they ranged the territory between Lake Superior, Lake Winnipeg, and Hudson Bay. The opening of the trade route from Lake Superior to Lake of the Woods, which took place late in this period, finds the Crees along the route which is now the international border" (Wilford 1937: 56). However, it seems likely that the area which now comprises the northeastern Minnesota counties of St. Louis, Cook, Lake, and Koochiching was also within the Cree territory, as this area is not ascribed to the Dakota whose areal limits are well defined (Wilford 1937). LaVerendrye is quoted by Wilford as saying that "the Cree, Monsoni, and Assiniboine had for a long time been allied against the Sioux and Chippewa" (Wilford 1937: 51). The Monsoni are an unidentified Algonquin group but are thought to be a branch of the Cree (Wilford 1937).

There can be 2 explanations for the bundle burials which do occur in Blackduck mounds. First, they may be the result of the Algonquins using a scaffold burial occasionally for some well-known individual as recorded by Bushnell (Bushnell 1920, 1927) and subsequently interring the bones in the customary mound along with primary burials. The second explanation could be that these represent Assiniboine burials after the alliance of that tribe with the Cree. Of the two, I feel that the first is the more probable explanation for most of the cases of secondary burials.

The presence of the Undifferentiated Woodland Wares, a group of non-Blackduck wares (Evans 1961) in Minnesota Blackduck sites may be accounted for, since they are very similar to the Mille Lacs material, as being perhaps of Dakota-Assiniboine origin. If, in the future, in Manitoba, a historically documented Assiniboine site were excavated and a certain amount of Blackduck material were found, this would not negate the above thesis as the close connections between the Assiniboine and Cree are well documented; and one would expect to find some mixing of the 2 manifestations.

In summary, the evidence consisting of geo-

graphical and cultural traits seems to negate the idea that the Blackduck focus is Dakota in origin and development; rather it is an Algonquin development.

NOTE: This paper represents a section on the "Ethnic Association of the Blackduck Focus" as contained in a Master of Arts thesis for the Department of Anthropology, University of Minnesota, entitled A Reappraisal of the Blackduck Focus or Headwaters Lakes Aspect. The thesis was undertaken to re-evaluate the data which had been published in the light of new information.

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GLASS FLAKE-SCRAPERS

Abstract

This report brings to the attention of workers interested in the historical period on the Plains the fact that bottle glass was occasionally used as material for scrapers by Indian craft-workers. Several specimens, found 150 miles apart, are described and discussed.

In 1959 during the course of archaeological testing of military dump grounds and contact campsites on the Fort Sill Military Reservation in southwest Oklahoma, the writer carefully examined all glass fragments recovered to check the possibility of their occasional use as material by Indian tool makers. Among the large numbers of fragments which were recovered from sites throughout the reservation, there was little evidence of the use of this seemingly plentiful, easily worked, and very efficient scraping material. This point does not seem to be mentioned in Plains literature, although notice has been taken of the fact that barrel hoops, old pots, and other metal objects were reworked by Indian craftsmen into projectile points.

Of the many hundreds of fragments examined only 2 were found which appeared to show secondary chipping (Fig. 10, (A-B). Both of these specimens were recovered from a military dump area (tentatively dated as having been in use between 1880 and 1890 A.D.) located along the west bank of East Cache Creek just east of the main gate of the reservation. Specimen A is made of a green ale-bottle glass (Type 8, Shaeffer 1960: 30), the glass fragment being roughly triangular in shape. The under (or interior) side of the glass is chipped unifacially across its wider end, but the apparent notch which shows in the photograph was probably the result of use rather than of original shaping. In addition to this chipping the long edge (to the right of the photograph on the reverse side) is slightly worked and secondarily retouched. The shorter side, which meets this chipped face at an angle, is also worked. The line of chipping, which can be seen as an undulating edge on the lower side of the specimen and as a

shadow along its right hand edge, apparently represents chipping intended to round the edge so that it could be grasped or hafted for use as a small scraper.

The second specimen, Specimen B, is of a brown beer-bottle or ale-bottle glass(Type 6, Shaeffer 1960: 33). It is quite rounded on all corners with unifacial, random chipping on all of the edges. There is some definite pressure flaking along the blade at the bottom of the photograph. Both surfaces are dulled by weathering. The general triangular shape common to both specimens and the rounded chipped surfaces conform in both instances to a single pattern of grasping in which the index finger must have curved around the top of the glass while the curved inner surface of the glass must have rested partially on the third finger of the right hand. The scraping motion apparently was made mainly by moving the wrist inward towards the body.

Several months later, while walking the relocation of a highway right-of-way in Creek county in east central Oklahoma, north of Oiltown, the author located an Indian campsite believed to be of the historic period. Scattered about on a hillside were pieces of unworked flint intrusive to the area as well as china and glass fragments. It was on this site that the third specimen was found (Specimen C). It was fashioned of a thick (3.0 cm) piece of light green glass (similar to Type 7, Shaeffer 1960: 30), probably part of a bottle base. While the shape differed from the previously described glass specimens, the edges had been worked so that the index finger could be curled around it for grasping. The flaking along the steep, semi-circular blade was definitely chipped with regular, evenly spaced flaking which had been weathered to the same dulled appearance as the body of the tool. These specimens found in locations separated by 150 miles are the only examples which the author has been able to identify as having been manufactured in all probability by Indians of the historic period in Oklahoma.

However, there is a scattering in other parts of the Plains of finds of glass artifacts. These are mostly instances, known to individual investigators, which have not yet found their way into the literature. For example, in Oklahoma, Harvey Washburn of Burbank, Oklahoma, reports (in conversation) having found a red glass "birdpoint" at the Fernandina or Deer Creek site, Kay County, in north central Oklahoma near the Kansas border. Glass points are also said by Washburn to have been found by collectors in Central Texas. However, in the matter of glass scrapers, only in the Dardenelles Reservoir area of Arkansas is an abundance of glass scrapers reported. Warren Caldwell states (unpublished report) that a considerable number of glass scrapers were recovered from sites 3PP20 and 3PP21, both suspected of Osage occupancy. In north central Kansas, Level County, at site 14JW202, Robert Neuman in an unpublished report describes a white glass scraper. A piece of glass telegraph insulator from this site is stamped 1893. From South Dakota, Hubert Smith in an unpublished report also describes a glass scraper. This specimen was made from a beer bottle sherd at the trading post site Fort Berthold II (1845-1890). Finally, in the literature Griffin (1949) reports the finding of a glass scraper from the Garrison Reservoir area of North Dakota.

There remains though the question why greater use was not made, even experimentally, of this relatively abundant, new material which occurred on the outskirts of all agencies, and military and trading posts around which the Indians were gathered during this period. Certainly the old manufacturing techniques could have been employed on this new material without departure from old forms and with the result of greatly improved efficiency.

Griffin, John W.
1949 An Authentic Glass Artifact. American Antiquity, Vol. 15, No. 1, pp. 56-57. Menasha.

Shaeffer, James B.
1960 An Archaeological Survey of the Fort Sill Military Reservation, OASP Paper No. 18. In Salvage Archaeology in Oklahoma, Volume 2. Archives of Archaeology, Number 11. Society for American Archaeology and University of Wisconsin Press. Madison.

James B. Shaeffer
University of Oklahoma
Norman, Oklahoma
May, 1961

FOR ILLUSTRATIONS OF GLASS SCRAPERS FOUND ON OKLAHOMA SITES SEE PAGE 285

REVIEWS

Edited by Warren W. Caldwell

Five Indian Tribes of the Upper Missouri: Sioux, Arikaras, Assiniboines, Crees, Crows. EDWIN THOMPSON DENIG. Edited and with an Introduction by John C. Ewers. University of Oklahoma Press, Norman, Oklahoma, 1961, pp. xxxvii, 217, 12 plates, map. $4.00.

Long before the rise of anthropology as a formal discipline, and of systematic fieldwork in modern fashion, many serious-minded persons had endeavored to record their often hard-won knowledge of native tribes of the New World, efforts that are invaluable today for the light they shed on times long gone. The missionaries, especially remembered for their efforts, probably outnumbered any other single group of such students and probably surpassed any other in the quantity and scope of their work. But by reason of their continued association with, and intimate knowledge of, native peoples, few persons were better placed to learn than were the traders. Yet few of these traders were as well equipped by temperament and education, had so serious a purpose in recording their knowledge, or applied their talents as well as did Edwin Thompson Denig (1812-1858).

Denig had spent more than 2 decades in trading with peoples of the Northern Plains when he began to write of them at length, apparently stimulated by requests made of him by various persons, among them Father de Smet, and perhaps particularly by the famous Inquiries devised and circulated by Schoolcraft to gather data on the Indians for administrative and scholarly purposes. To these questionaires Denig carefully replied, and one result was a manuscript entitled "Indian Tribes of the Upper Missouri" which was published by the Bureau of American Ethnology in 1930. Despite its title, that work relates particularly to the Assiniboine; and it is regarded by Ewers, editor of the present material, as the most complete and authentic description of Assiniboine culture in the mid-19th Century known to ethnology.

The questionaires and other inquiries to which Denig had endeavored to respond seem to have troubled him somewhat, perhaps because of later devices for recording data on native cultures - and he formed ambitious plans for a more comprehensive, integrated work on the peoples he knew so well. Such a work, however, he was never able to complete as planned. Since his personal papers became scattered and some of them were lost after his death, it is remarkable that any parts of his work should have survived at all. A decade ago, after a century of neglect, these other unsigned materials were recognized by Ewers and published in separate parts; and now they have been gathered in a convenient volume equipped with useful notes and comments by its specially qualified editor. The preservation of these additional parts of Denig's literary efforts among the effects of his friend Alexander Culbertson, who seems to have intended to assist with the magnum opus and was long thought to be its author, and the recognition by Ewers of their true authorship and significance is an interesting story in itself, not without elements of mystery. But it was the intrinsic value of these papers that called for their proper publication, especially in view of the fact that some of Denig's data had been used, though without full credit, by Dr. Ferdinand V. Hayden soon after Denig's death. The full publication of these new parts of Denig's literary remains thus restores primary sources of the first importance to students.

Denig's descriptions of the Indians he knew present them as they unquestionably were, rather than as they might have been. For Denig was no sentimentalist, and did not hesitate to paint scenes and portraits which are realistic rather than romantic. Candid eyewitness accounts such as his are relatively rare, and they help to balance many less authentic or reliable, though better known, accounts of native peoples.

Denig's brief comments on the topic of the Indian trade are also of special interest because here also he spoke from long experience. Even the more thoughtful traders seldom seem to have commented on the effects of the trade upon native peoples. They cannot have been oblivious to the increasing dependence of their clientele upon it, often for their very existence, but the traders had small reason to wish to delay or reverse that trend. Thus in Denig's writings only the briefest speculations about the ultimate fate of the tribes appear, and there are few expressions of deep concern over their fate. Yet Denig and others of his stature realized full well that the trade, involving economic domi-

nation of the producers of furs and hides, could lead only to complete political and social domination.

Denig's most revealing comment on the trade as he knew it is an admiring reference to the monopolistic British system in North America in his time, and to the operations of the Hudson's Bay Company. That orderly system, which he had probably then seen only at a distance, he contrasted with the chaos of the uncontrolled trade in the United States. He was the advocate, nonetheless, of the interests of American traders - or at least of the Chouteau firm he served so well - and his comments are the orthodox comments of his group. He may have been genuinely convinced that the system of trade obtaining on the Upper Missouri was as good as any that could have been devised under the American system of free enterprise. Elsewhere, with every mark of sincerity, he asserted his belief that the trade had promoted the general cause of civilization among the Indians concerned. When he wrote in the mid-1850's, there was perhaps some evidence to support his contention. Had he survived the decline of the trade and of its native clientele, he might have been as bitterly disillusioned as were some other old hands in that trade.

Denig says little of Indian antiquities, merely mentioning the existence of burial mounds and rock cairns within the Cree range. These, he said, were known to contain remains of Cree who had died during the smallpox epidemic of 1776 - a date, as Ewers notes, that should probably be 1781-82 and subsequently. Denig wondered, however, about the accretive growth of such mounds which would, he thought, account for the large size of some; and his passing comment contains the thoughtful reflections of one who had undoubtedly often witnessed native burial rites. He even speculated on what might eventually be learned through careful stratigraphic excavation of such deposits, taking account of the cultural advances of peoples as evidenced by progress in the manufacture of artifacts, if any. Of such progress, however, he professed to be doubtful.

This attractive volume is a noteworthy addition to the long list of which it forms a part: The Civilization of the American Indian Series. One could point out numerous typographical errors (though none likely to confuse or mislead), and the fact that the index is much abridged and somewhat capricious. Thus, the numerous text references to the Gros Ventres of the Missouri, alias Minetare or Hidatsa, are missing from the index (perhaps by accident) whereas the few references to the more remote and separate Gros Ventres of the Prairies, alias Atsina, are carefully gathered there. Some of the interesting and appropriate illustrations by Bodmer, Catlin, and others, reproduced with the texts as first published, have here been omitted, but a useful map has been added. This new edition of Denig's contributions to knowledge is most welcome, and the editor and the press are entitled to the gratitude of students for having provided it.

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Spotted Tail's Folk: A History of the Brûle Sioux. GEORGE E. HYDE. University of Oklahoma Press, Norman, 1961. xix + 329 pp., 9 pls., 4 maps. $5.00

The career of Spotted Tail, last of the outstanding chiefs of the Brûle Sioux, has been badly distorted by historians. This situation is largely the result of dependence upon information obtained from Oglala Sioux on the Pine Ridge Reservation which was given wide distribution in the writings of Dr. Charles A. Eastman. Even the Bureau of American Ethnology Handbook of American Indians contains several of Eastman's patent falsehoods and adds a distortion or two of its own. George E. Hyde, the distinguished student of the Plains Indians and authority on the history of the Sioux, has set the record straight with his impressive biography of the Brûles' great leader, Sinte Gleska.

Repeating the method he used earlier for the story of the Oglalas in Red Cloud's Folk, Hyde has interwoven his biographical treatment with the history of the Brûle tribe to 1881, the year of Spotted Tail's death. Not without reason does he state that the record of the Brûles as a distinct tribe ended with that tragic killing. After 1881, they never again had a leader who could speak with authority for the vast majority of the tribe or command recognition as head-chief from officials in Washington.

As late as 1849 the Brûles were commonly called "Tetons" by traders and agents who were acquainted with their history. From this and other scattered bits of information, Hyde concludes that they were the parent stock of the western Sioux, and led the migration of these people from their old homes in Minnesota to the Plains country west of the Missouri River. With their acquisition of firearms and horses, the Brûles penetrated from the White River region of Dakota, where Spotted Tail was born, into Nebraska and Kansas.

Making good use of source material heretofore largely ignored, Hyde traces the rise of

Spotted Tail to the leadership of his tribe, an advancement that coincided with the development of the Brûles as a distinct Indian power on the Plains. Spotted Tail was one of the finest warriors the Sioux people ever produced, counting numerous coups in battles with the hated Pawnees and other tribal enemies. This record grew during the hostilities of the first of the great Sioux wars in the mid-1850's. When Little Thunder's village was destroyed on the Blue Water by General William S. Harney's command in 1855, Spotted Tail, although badly wounded, fought such a furious rear-guard action against the soldiers that he received notice in the St. Louis newspapers. He had been among the leaders of a raid on the Overland Mail coach a year earlier, an operation which netted the Indians $10,000 in gold (never recovered), and for this he was a fugitive eagerly sought by government officials. When he and 2 companions surrendered voluntarily to the authorities in the fall of 1855, they were sent to Fort Kearney for a year as prisoners of war. This experience was the turning point in Spotted Tail's life. It afforded him an opportunity no other important leader of the Sioux had ever before experienced to become familiar with the great numbers and power of the white people. He saw enough of their resources to realize the futility of the efforts of the Plains tribes to resist their inevitable conquest through warfare.

Spotted Tail was by no means a pawn in the hands of the whites or a Quisling to the interests of his people. When the Sioux went on the reservation after the treaty of 1868, he began a struggle, which lasted until his death, to delay the government's efforts to destroy the tribal organization of his people and force them to take up a way of life for which they were unprepared. In the troubled times during the Sioux War of 1876, when the reservation Indians were at the complete mercy of the United States government, Spotted Tail led the movement to prevent the total subjugation of the Sioux by a nation eager to avenge the Custer "massacre" and other military setbacks suffered at the hands of the hostiles. His services as a peace-talker during the winter of 1876-77 resulted in the surrender of nearly all the hostile forces and averted further military campaigns and additional bloodshed and suffering on both sides.

As a result of Hyde's presentation, Spotted Tail emerges as an Indian leader of superior ability possessing a deep concern for the welfare and future of the entire Sioux nation, and not merely with the narrow, selfish interests of his own particular band. The statements made about him by Charles A. Eastman are subjected to a careful examination and proven false. The accusation that Spotted Tail was part of a plot which brought about the death of Crazy Horse in 1877 is placed in a queer light by the disclosure that following the death of their son, Crazy Horse's mother and father went to the Brûle chief for protection from their own people, the Oglalas at Red Cloud Agency. Similarly, the murder of Spotted Tail by Crow Dog is given new perspective by a detailed study of Brûle tribal politics. The efforts of a small group of ambitious minor chiefs, Crow Dog among them, to end Spotted Tail's leadership of the tribe was the major cause of the killing. That fairy tale about his being shot for stealing another man's wife no longer stands up under this evidence.

This is a volume which should be of interest to both anthropologists and historians. Undoubtedly there will be those who will find fault with it, just as certain segments of the professional world have been greatly upset by some of Hyde's earlier efforts. Mr. Hyde exhibits a certain disdain for the sacred canons of "scholorship" by writing in an informal manner and with the virtual omission of documentary footnotes. Yet, over half a century of research has ably equipped him to understand the Sioux people and to write about their history. As a biography, Spotted Tail's Folk is a refreshing relief from the hero-worshiping accounts that have appeared about other Sioux leaders. This is not to say that Hyde does not admire Spotted Tail. His high regard for the Brûle chief is very plain; but so is the fact that this admiration is based not only upon Spotted Tail's significant record as a warrior but also upon his efforts to lead his people in the painfully difficult transition from their traditional, wild, nomadic existence to the ways of white civilization.

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Salvage Archaeology in Oklahoma, Vol. 1: Papers of the Oklahoma Archaeological Salvage Project, Nos. 8-15. JAMES B. SHAEFFER. Identifications and Morphology by ALICE M. BRUES, A. L. BUCK, OREN E. EVANS, CHARLES C. CARPENTER, DAVID E. KITTS, AND CARL O. RIGGS. Archives of Archaeology, No. 9, Society for American Archaeology and University of Wisconsin Press, Madison, 1960, p. 217, 84 figs. on 3 double-sides cards. $1.25.

These papers, appearing on Microcard, are devoted to reports of sites investigated as part of the Oklahoma Archaeological Salvage

Program, and cover work conducted between 1956 and 1958 in the course of highway salvage in Oklahoma. The results are prefaced by a brief description of the local highway salvage program. This exposition will prove of interest to archaeologists contemplating the establishment of a highway salvage program in their own state, and supplements A Guide for Highway Salvage Programs in Archaeology, History, and Paleontology (Committee for Highway Salvage Archaeology, Society for American Archaeology, Associated General Contractors of New Mexico, 1958) with details from experience in Oklahoma. Shaeffer outlines the local factors that necessitated modification of some of the procedures for highway salvage recommended in the Guide.

A regional and chronological summary of the prehistory of the Oklahoma area will be of interest to those not intimately acquainted with the archaeology of that state. This resume is useful for the general reader, although a number of concluding generalizations relating to climatic change lack credibility. For example.

> Mississippi Valley culture. . . . moved westward under favorable conditions; to a lesser degree it moved southward during the early Archaic and northward during Fulton times (p. 39).

The movements of culture complexes across Oklahoma, and their relation to climatic change, will require much documentation. The present study presents none of the basic climatic data necessary to verify such assertions, although Shaeffer's data will ultimately be useful in outlining such generalizations.

The bulk of the text is devoted to raw data. Detailed site reports, treated as separate papers, are presented for 8 sites in which excavations were conducted: Sparks, 34LT-3; Grace, 34PS-55; Evers, 34OF-1; Montgomery, 34ML-1; Heerwald, 34CU-1; Richard, 34WD-1; Hedding, 34WD-2; and Rhoton, 34TX-29. These 8 sites, distributed rather evenly across the state, revealed many new data on Oklahoma prehistory, including a new pithouse type and fresh data on known complexes. Following each paper is a statement of the affiliation and significance of the site.

The text is unfortunately marred by the fact that the limitations of publication on Microcard were occasionally overlooked. [The manuscript with its accompanying photographs and illustrations was originally prepared by the author for conventional publication and not for Microcard publication, WWC] Legends are illegible on many of the maps, curtailing their value as otherwise well-drafted adjuncts to the text. Photographs of artifacts are of limited utility, for they are often too small and detail is wanting, particularly the illustrations of ceramics. These illustrative drawbacks may pose handicaps for workers within Oklahoma, but they are not critical for those outside the state for artifacts are well described in the text.

Shaeffer and his associates are to be commended for releasing the data on these important sites within 3 years of the completion of the field work, and for a very adequate presentation of the field data. While the rising costs of publication make Microcard a convenient outlet for the rapidly accumulating data from salvage work, I feel compelled to repeat here what others have said in reviews of Microcard publications: summaries should also be released in conventional outlets, particularly when the data on new complexes or sites affect prior syntheses.

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Oneota Sites on the Upper Iowa River. MILDRED MOTT WEDEL. The Missouri Archaeologist, Volume 21, Numbers 2-4, December 1959. Columbia. 181 pp., 2 tables, 6 maps, 36 figures.

This article is a continuation of investigations into the study of the Oneota Aspect, an Ioway manifestation. It is a continuation that the author herself proposed 21 years earlier in her Master's thesis (Mott, Mildred. "The Relation of Historic Indian Tribes to Archaeological Manifestations in Iowa." Iowa Journal of History and Politics, Volume 36, Number 3, pp. 227-314, 1938. Iowa City). This current report deals basically with Oneota occupations at 7 sites located along the Upper Iowa River in Allamakee County, northeastern Iowa. The excavations were conducted between 1936 and 1938 under the supervision of Charles R. Keyes; Ellison Orr acted as field director.

Although handicapped with the inherent obstacles of reporting from someone else's field notes, the author presents the reader with an excellent account of the activities prior to and during the excavations at each of the sites. The amount of information concerning the Oneota components is quite variable, not only because of the time and funds involved, but also due to the fact that most of the sites were investigated to gain data on the Woodland components while the Oneota material was considered somewhat incidental. Nevertheless, a great variety of Oneota features and artifacts is discussed and 2 extensive trait lists are presented; one pertains

to the 7 sites and the other to the Orr focus of the Oneota Aspect. Of particular interest is the 13 page discussion of laboratory tests conducted on the copper and brass artifacts to determine "...their significance as indicators of European contact."

The last section of the article contains a thorough discussion of the Orr focus. The Allamakee County sites along with 2 sites from Wisconsin and 3 from Minnesota are considered as components of the focus. It is in this last section that the reader is given a broad understanding of the Oneota complex in the areas under consideration.

There are 6 line drawn maps, one representing the geographical location of the sites in Allamakee County, the other 5 showing the excavations at the individual sites. The figures consist of photographs and drawings of the excavations as well as the stone, bone, shell, metal, and ceramic artifacts. In view of the excellent text in this report it is difficult to understand the extremely poor quality of the line drawings. There is also a disturbing number of omissions and mistakes between the text references and the illustrations. Then too, one might ask for a bit more documentation in the discussion regarding the historic tribes in Iowa. Finally, the reference to the White Rock focus, on page 105, is incorrect. There is a site and an aspect named White Rock; however, there has never been a White Rock focus in Kansas.

In conclusion this reviewer believes that the merits of the report far surpass the criticisms presented. Historians, as well as archaeologists, owe a debt of gratitude to Mildred Wedel.

Robert W. Neuman
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Lincoln, Nebraska

The Little Osage and Missouri Indian Village Sites ca. 1727-1777 A.D. CARL H. CHAPMAN. The Missouri Archaeologist, Vol. 21, No. 1, December, 1959. 67 pp., 44 fig.

This report presents documentary and archaeological data on two 18th century Indian sites located near each other on the south bank of the Missouri River in Saline County, Missouri. One was inhabited by Little Osages and the other by the Missouri tribe. The excavations were made during the years 1939-1942, and although some report has been made upon them (particularly upon the Little Osage site), this is a more complete and detailed statement of the findings. The sections describing the archaeological material are decidedly more detailed and full than is the historical sketch.

Chapman states in several places that the approximate time period represented by the sites is 1727-1777 A. D. The earlier date hinges on the abandonment of Fort Orleans, which event Chapman thinks was related to the slight shift of the tribes upstream to these sites from their former locations nearer the fort. The latter date is that of Lt. Gov. Cruzat's report on Indian tribes receiving presents at St. Louis, wherein he also describes their village locations. Chapman admits that the end date may be too early. I strongly agree with this, for I see no good reason to discount Louisiana Gov. Miro's 1785 statement that the tribes were still on the Missouri River at that time. In fact, other historical evidence, both direct and indirect, suggests to me that they may have continued to live here on the Missouri into the 1790's.

The archaeological sections combine information from field studies with descriptions of pottery and other artifacts found in local collections, together with data from early 20th century reports of the sites. At both sites posthole patterns of rectangular pole framework houses were found, as well as storage pits. Extended supine burials are reported by collectors from both sites. The artifacts are an interesting mixture of native-made objects (including some pottery) and trade goods in abundance. The pottery in each case is compatible with that from earlier Little Osage and Missouri Indian sites in Missouri, although the later Little Osage pottery is much plainer. It did not occur with burials.

In view of the fact that these 2 sites were inhabited contemporaneously and were so close together, the cultural and historical implications in the differing kind and quantity of trade goods found at the 2 villages are extremely interesting. For instance, a large number of gun parts and flints were found at the Little Osage site (and have been described in the December, 1960, issue of The Missouri Archaeologist), while only 10 gun flints occurred at the Missouri site. The frequency of occurrence of glass (bottle?) fragments was in direct reverse. There were more trade kettles at the Osage site, but more pottery at the Missouri site; and there also it was found with burials. When related to the historical documentation for the area and time, these data should give valuable help in accurate understanding of the interaction between these tribes and European traders and government officials, as well as between the aggressive Little Osages and the dwindling Missouri tribe.

This report is intentionally largely factual

and Chapman does little more than hint at interpretative ideas. The data will be more fully evaluated and utilized for cultural reconstruction as part of a larger study to be made on the Osage Indians. Although the report bears evidence of haste in assembling, it is a valuable addition to Chapman's other reports on Missouri and Osage sites in his state. The generous number of illustrations is very helpful.

Mildred Mott Wedel
Washington, D. C.

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FRANK BRYAN

1890 - 1960

Frank Bryan, who died at Groesbeck, Texas on August 17, 1960, at the age of 70, was by vocation a geologist and successful oil operator and by avocation a novelist, folkloreist, and in later years, an archaeologist specializing in the area of the Staked Plains.

Bryan was born at Bryan Mills, Cass County, Texas in 1890. His grandfather was a captain in the 2nd Texas Rangers during the Civil War; his father was an alumnus of Trinity College; his mother, a graduate of the University of Texas. However, Bryan grew up in southeastern Oklahoma, where the family had moved, and received his college education at the University of Arkansas, where he was a star linesman on the Southwestern Conference Championship football team of 1910.

Upon graduation Bryan became a geologist, and by 1915 he was chief geologist of the Mexican Gulf Oil Company at Tampico, Texas. During World War I he rose to the rank of captain and was wounded while overseas. Upon his return he served as President of the 90th Division Veterans Association. Forming his own oil company with partners after the war, he sold his interest in 1926 to become an independent oil geologist at Waco, Texas. In 1937 he moved to Groesbeck, subsequently dividing his time between his home there and southeastern Oklahoma where he had acquired a large farm. During this period Bryan found time to found the American Association of Petroleum Geologists. He was a novelist of distinction, having written the best seller The Scarlet Cockerel and other books. In addition, he wrote many articles on geology, was a tireless writer of "Letters to the Editor", and was a longtime contributor to "Texas Folk Lore Yarns" of the Sunday Dallas News and Houston Chronicle. He was also an efficient and well-liked civic leader and in his spare time, an enthusiastic gardener. His name has appeared in Who's Who in the South and Southwest for the last 25 years.

Among his many avocations, archaeology was his favorite. It was during his geological field trips that he amassed his large collections of artifacts, a part of which is on loan to the University of Texas. In addition to his field work Bryan spent much time in research, correlating the archaeological remains of the Staked Plains with its geology, climate and history. But his particular contribution to the archaeology of the region was made possible by his wide, first hand knowledge acquired by years of foot-by-foot exploration of the oil-bearing areas of the state of Texas.

His interest in archaeology was not confined to field exploration and study. He was one of the leading figures in promoting and organizing the Central Texas Archaeological Society of which he later became president. He remained an active member ready to contribute a paper or to give financial assistance in the publication of the Society Bulletin, several issues of which would not have been published without his help.

It was during this early period, in 1932, that I became personally acquainted with Frank Bryan. He impressed me at the time as being exceptionally patient and understanding with explanation; and although his thoughts on various archaeological problems in this region did not always agree with those presented by "authorities", he never seemed to force his ideas on anyone. However, as the years went by many of his "controversial" theories began to be accepted as more information came to light.

In all contacts over the years I never saw him lose his temper or find fault with his field companions. He always said that the best place to evaluate a man was to rough it with him on a field trip. By his own test he measured up well. The world of non-professional archaeology lost a generous, able, and great man in the death of Frank Bryan.

Bryan's major published papers on the archaeology of Central Texas are given below. They do not include short papers such as those appearing in the Dallas News and other scientific publications.

Bryan, Frank

Notes on the Archaeology of Central Texas. American Anthropologist, Vol. 33, No. 1. Menasha.

Archaeological Remains in the Black and Grand Prairies of Texas. Bulletin of the Texas Archaeological and Paleontological Society, No. 2, pp. Abilene.

The Coyote Lake Midden. Central Texas Archaeologist, No. 6, pp. Waco.

Early Texas Travellers. Central Texas Archaeologist, No. 7, pp. Waco.

Frank W. Watts
Central Texas Archaeology Soc.
Waco, Texas

PLAINS PUBLICATION

SERIALS

ARKANSAS ARCHAEOLOGICAL SOCIETY

Title: Newsletter
Serial No: Vol. II, No. 6, June, 1961
Published At: University of Arkansas, Fayetteville, Arkansas
Editor: Hester A. Davis
Contents: Letter from the (Temporary) Editor; Prairie Mounds of Arkansas - J. H. Quinn; Arqueologia Panamena - C. R. McGimsey III; Annual Meet Arkansas Archaeological Society; University of Arkansas Archaeological Field Session; Archaeological Open House; Notes and News; Membership; Notice of Meetings.

Title: Newsletter
Serial No: Vol. II, No. 7, September, 1961
Editor: Charles R. McGimsey, III
Contents: Letter from the Editor; The Role of the Nonprofessional in the Local Society - C. H. Webb; Annual Meeting; The Galatia Shelter - P. and V. Shiras; Stone and Stone Working - C. R. McGimsey III; Notes and News; Archaeological Open House; New Members; Notice of Meetings.

COLORADO ARCHAEOLOGICAL SOCIETY

Title: Southwestern Lore
Serial No: Vol. XXVII, No. 2, Sept., 1961
Published At: University of Colorado, Boulder, Colorado
Editor: John Greenway
Contents: Ethnographic Notes upon the Caribou Eskimo - W. H. Oswalt; News for Archaeologists; Machine Age Archaeology - R. T. Babcock; Looking with Perspective at "The American Southwest; A Problem in Cultural Isolation" - P. D. Schaafsma; Book Reviews; Annual Society Meeting.

COMANCHE HISTORICAL SOCIETY

Title: Bulletin
Serial No: Vol. 1, No. 6, July, 1961
Published At: Museum of the Great Plains, Lawton, Oklahoma
Editor: Barbara Anderson
Contents: Locomotive Dedication Cermonies; Southwest Turnpike Exhibition; Museum Featured in Journal of Agricultural History; Special Program at the Museum; Special Exhibition Opening; Special Art Exhibition.

KANSAS HISTORICAL SOCIETY

Title: Mirror
Serial No: Vol. VII, No. 5, September, 1961
Published At: Kansas Historical Society, Topeka, Kansas
Editor: Nyle N. Miller, Secretary
Contents: Annual Meeting in October; Society Exhibit at State and Mid-America Fairs; Members to Receive New Civil War Bibliography; The Secretary's Desk; Book Ends.

Title: Kansas Historical Quarterly
Serial No: Vol. XXVII, No. 3
Published At: Kansas State Historical Society, Topeka, Kansas
Editor: Kirke Mechem
Contents: Enlistment and Conscription in Civil War Kansas - A. Castel; Letters of Peter Bryant, Jackson County Pioneer - Ed. by D. M. Murray and R. M. Rodney; Kansas Before 1854; A Revised Annals - L. Barry; Some Notes on Kansas Cowtown Police Officers and Gun Fighters - N. H. Miller and J. W. Snell; Bypaths of Kansas History; Kansas History as Published in the Press; Kansas Historical Notes.

KANSAS STATE TEACHERS COLLEGE

Title: The Emporia State Research Studies
Serial No: Vol. 9, No. 4, June, 1961
Published At: Graduate Division, Emporia, Kansas
Editor: William H. Seiler
Contents: A Selected, Annotated Bibliography of Sources in the Kansas State Historical Society Pertaining to Kansas in the Civil War - E. D. Decker.

IOWA ARCHAEOLOGICAL SOCIETY

Title: Newsletter
Serial No: Vol. IX, No. 5, September, 1961
Published Sanford Museum
At: Cherokee, Iowa
Editor: W. D. Frankforter
Contents: Next Meetings; Past Meetings Notes; Aqualung Archaeology in Guatemala; Notes and News; Membership List.

OKLAHOMA ANTHROPOLOGICAL SOCIETY

Title: Newsletter
Serial No: Vol. 9, No. 8, September, 1961
Published University of Oklahoma
At: Norman, Oklahoma
Editor: Robert E. Bell
Contents: A Re-Survey of Oklahoma Archaeology (Part I of a series), - Max A. Ray; Antiquity of Man; Broken Bow Reservoir Survey - Don Wycoff; New Book.

STATE UNIVERSITY OF SOUTH DAKOTA

Title: Museum News
Serial No: Vol. 22, No. 7, July, 1961, pp. 4.
Published W. H. Over Museum
At: Vermillion, South Dakota
Editor: Wesley R. Hurt
Contents: An Archaeological Investigation in the Gavins Point Area, Yankton County, South Dakota - R. L. Hall; Museum Exhibits; Recent Acquisitions; Traveling Exhibition; Staff News.

Title: Museum News
Serial No: Vol. 22, No. 8, August, 1961, pp. 6
Contents: Archaeological Work at the Tabor and Arp Sites - W. R. Hurt.

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Title: Texas Archaeology
Serial No: Vol. 5, No. 3, July, 1961, pp. 12
Published University of Texas
At: Austin, Texas
Editor: E. Mott Davis
Contents: Current Events; Alabama Makes It Fantastic; For West Texas and the Panhandle; A New Publication; Bat Guano; Gulf Coast Archaeological Society; Some Idea on Archaeological Collaboration; New (Old) Horizons in Japan; Science of Man; Reviews; Beginner's Guide to Archaeological Digging - E. M. Davis; Advertising Indian Relics.

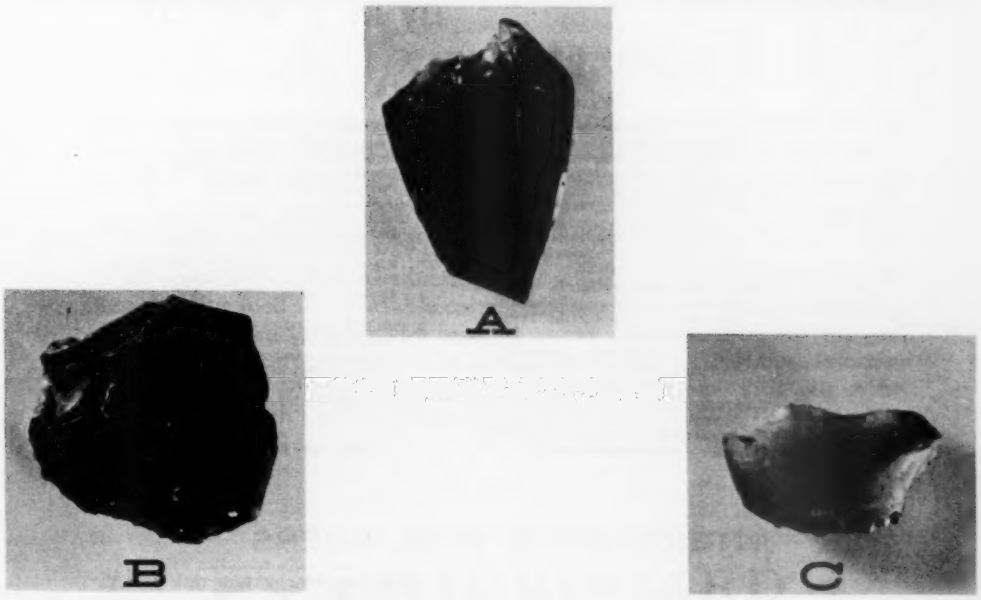

Fig. 10- Glass Scrapers. (A)(B) Site Cm-9, Fort Sill Oklahoma, (C) Site 47, Creek County, Oklahoma

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applied to the
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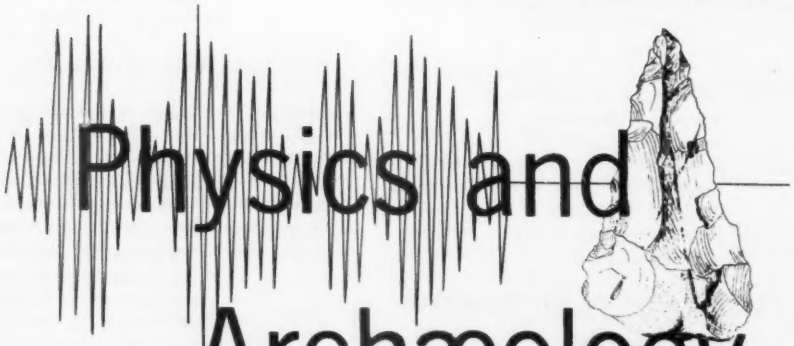

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by M. J. AITKEN

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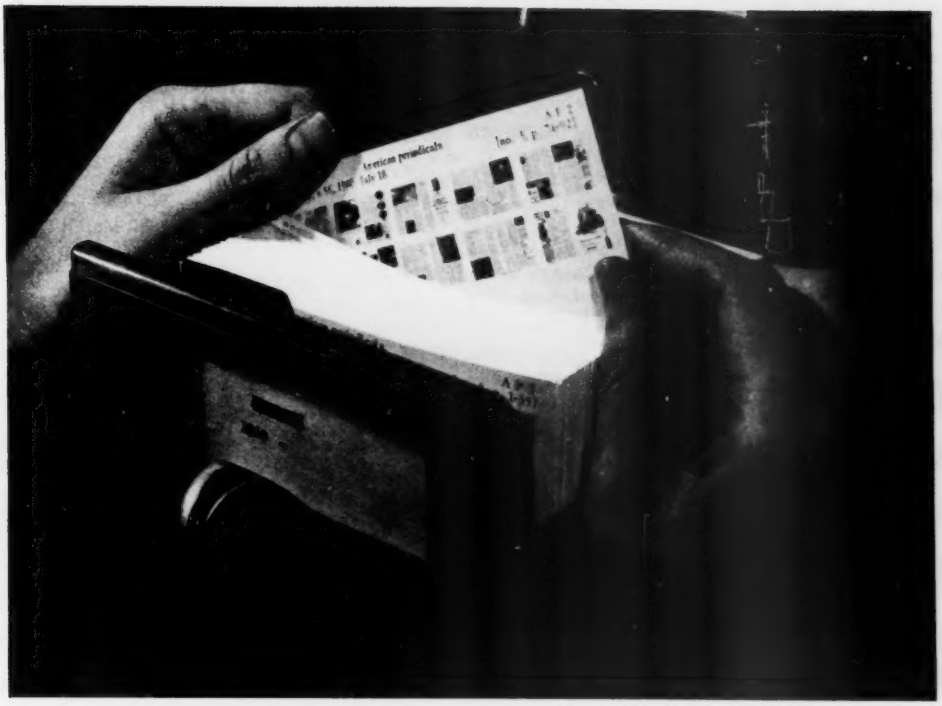

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